

Behavior analysis in marriage counseling: A methodological review of the research literature

*El análisis de la conducta en el consejo conyugal: un análisis
metodológico de la literatura de investigación¹*

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ABSTRACT

Marital distress is progressively becoming a severe social problem. Under some social circumstances, crime and delinquency is greater for children of unhappy or broken homes, alcoholism is more frequent among the separated, and marital distress precedes about half of the first admissions to mental hospitals. Recently, numerous behavior analysts have conducted research on the effects of behavioral technology on marital distress. The most reliable results point out that procedures such as behavioral contracting, training couples on verbal and nonverbal interaction, target behaviors definition, problem analysis and negotiating skills, among others, are successful in alleviating marital distress. These procedures also show superiority when they are compared with others derived from psychodynamic conceptions. The research methodology of many of these behavioral studies, however, shows some severe limitations. The main weaknesses include: lack of reliable dependent measures, lack of validity of independent procedures, incompetent experimental designs and personal research biases. Some methodological procedures are suggested to improve the quality of further studies and a summary table abstracts the status of this research area.

DESCRIPTORS: marriage counseling, marital distress, spouses' interaction, behavioral technology, behavioral contracts, research methodology, experimentation, human subjects.

RESUMEN

Los problemas conyugales se están convirtiendo cada vez más en un severo problema

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social. Bajo ciertas condiciones sociales, la delincuencia es mayor entre hijos de familias desintegradas o con problemas maritales, el alcoholismo es más frecuente entre los miembros de parejas separadas, y los problemas maritales preceden aproximadamente a la mitad de los primeros ingresos a los hospitales psiquiátricos. Recientemente, numerosos analistas de la conducta han llevado a cabo estudios sobre los efectos de la tecnología conductual en la solución de problemas conyugales. Los resultados más confiables señalan que procedimientos tales como contratos conductuales, el entrenamiento de las parejas en interacción verbal y no verbal, definición de conductas blanco, análisis de situaciones problemáticas y habilidades de negociación, entre otros, son eficaces en la reducción de problemas conyugales. Estos procedimientos también mostraron una superioridad cuando se le comparó con otros, derivados de concepciones psicodinámicas. Sin embargo, la metodología de muchos de estos estudios conductuales muestra algunas limitaciones severas. Los principales puntos vulnerables incluyen: carencia de medidas dependientes confiables, carencia de validez de procedimientos independientes, diseños experimentales incompetentes y proyecciones personales en la investigación. Se sugieren algunos procedimientos metodológicos para mejorar la calidad de estudios en el futuro y al final, una tabla resume el estado de esta área de investigación.

DESCRIPTORES: consejo conyugal, problemas maritales, interacción conyugal, tecnología conductual, contratos conductuales, metodología de investigación, experimentación, sujetos humanos.

Marital distress is an important social problem. The most notable fact about marriage in the last twenty years is the rising statistic of its demise (Gelman, Huck, Salholz, Monroe, Weathers and Morris, 1981). In addition, marriage distress seems to be correlated with other major social problems. Crime and delinquency is greater for children of unhappy or broken homes; alcoholism is more frequent among the separated and, marital distress precedes about half of the first admissions to mental hospitals (Azrin, Naster and Jones, 1973). Since about 95 percent of the adult population has at least one marriage in a lifetime, marital distress demands the attention of behavioral scientists.

One purpose of the present paper is to summarize the current status of research carried out to evaluate operant procedures in marriage counseling. The problems most frequently described as components of marital distress will be discussed in terms of the way in which behavioral technologists have attempted to define, measure and solve them. A second purpose is to describe the methodological weaknesses of these research efforts and to suggest some possible solutions. At the end of the paper, a table will summarize the status of this research area by pointing out the studies' main features and methodological characteristics. The paper will focus only in studies which made some type of experimental comparison and had distressed couples as subjects.

Operant Research in Marital Distress

Probably, the earliest published account of the application of operant technology to marital problems is that of Goldiamond (1965). The author describes the use of procedures directly derived from operant principles such

as stimulus control and reinforcement. The counselor provided the subjects with instructions to: a) systematically define and record their own problem behaviors, b) agree on behaviors that were to be either promoted or diminished, c) agree on the conditions under which behaviors should occur, d) provide positive consequences for the occurrence of desirable behaviors, and e) physically rearrange particular settings in order to establish stimulus control over specific behaviors. In every case, the counselor (the author himself) discussed and conducted the analysis of the strategies to be implemented explaining the operant principles, and supervising the appropriate application of the procedures jointly with the counselees.

Even though Goldiamond's paper is not a research report in a strict sense (no specific research comparisons were established), it was probably the first systematic attempt to apply procedures derived from operant principles to this problem area. It is interesting to notice that the five procedures described by Goldiamond, have varied little in the subsequent development of this area, except for the addition of specifically training couples on discussion and negotiating skills.

In order to investigate the effect of operant procedures on marital problem behaviors, the first step is to specify them so that a dependent variable can be devised. The most frequent marital problems cited in the literature include lack of ability by the spouses to specifically identify and define target or problem behaviors and situations, lack of verbal skills to analyze and propose solutions to problems, frequent aversive verbal interaction, scarce or inadequate non-verbal interaction, lack of feedback on spouse's behavior and, too little verbal communication, among others.

Psychometric-type measurement of marital distress

The behavioral approach to marital counseling has made extensive use of self-report rating scales and opinion questionnaires and inventories. Even though there are no reasons to assume that there are features intrinsically inadequate or defective about these instruments, some of the proponents of their use (e.g. Edwards, 1975; Anastasi, 1982) have themselves warned researchers about using them in the absence of an adequate assessment of their validity and reliability.

Probably the most frequently used scales of this type are the Locke Wallace Marital Adjustment Scale (MAS) (Locke and Wallace, 1959); the Areas of Change Questionnaire (A-C) (Weiss, Hops and Patterson, 1973), and the Marital Happiness Scale (MHS) (Azrin, Naster and Jones, 1973). In using these instruments, researchers have the subjects answer or rate the appropriate items on the bases of the subjects' own perception or judgement. The scales generally include such areas as communication, sex, expression of affection, recreation, personal workload, household responsibilities, etc. Practically no mention is made in the operant literature of the level of validity and reliability of such instruments.

Direct Observation Measures in Marital Distress

Research studies have also used a number of direct observation measures derived from specific behavioral definitions (e.g. Stuart, 1969; Eisler, Hersen, and Agras, 1973, Goldstein and Francis, (Note 1). In this modality, researchers have covered a wide variety of behaviors ranging from looking at spouse's face during conversations (Eisler et. al., 1973), to number of beer cans dropped on the house's Floor (Goldstein and Francis, Note 1). Recording procedures have also varied widely, ranging from the use of finger press counters (e.g. Liberman, Levine, Wheeler, Sanders and Wallace, 1976); to videotaped interaction (e.g. Peterson and Frederiksen, Note 2; Margolin and Weiss, 1978, Patterson, Hops and Weiss, 1978).

Direct observation procedures usually involve identifying target behaviors and defining them in terms of observable physical events that, in turn, generate systematic and reliable recording. Within the area of behavioral marriage counseling, probably the most systematic observational method developed is the Marital Interaction Coding System (MICS), (Weiss, et. al. 1973). It consists of a 29-category observational system that produces a sequential recording of verbal and non-verbal interaction between spouses. The validation of this system has been assessed through treatment studies. (e.g. Patterson, et. al., 1975), which showed that the MICS is moderately sensitive for the discrimination of preintervention and postintervention changes. Other studies (Birchler, Weiss and Vincent, 1975) showed that the MICS accurately discriminated couples who defined themselves as distressed or non distressed. In addition, the MICS has allowed for high levels of interobserver reliability ranging from 70% (Jacobson, 1977) to 85% (Liberman, et. al., 1976). Some examples of behavior included in the MICS are: paying attention, approving, agreeing, compromising, positive physical contact, accurate description of problems, proposing solutions to problems, criticizing, etc.

Independent Procedures

While behavioral marriage counselors and therapists have used a wide variety of procedures derived from operant principles, a common denominator of virtually all of them has been to train the distressed couples to clearly identify target behaviors and problems. This generally culminates in the elaboration of menus of reinforcers and/or detailed inventories of marital problems.

Another procedure very frequently used in marital therapy is the elaboration and implementation of some type of agreement or behavioral contract. These contracts vary in degree of formality, inclusiveness of behavioral categories, and specificity of consequences on behavior. In general, contingency contracting serves as a background upon which therapists impose other procedures such as reinforcement, cueing systems, modeling, prompting, reading assignments, therapist's explanations, mutual exhibition of progress data, etc.

Other frequently used procedures that have been evaluated in combina-

tion with behavioral contracts or by themselves, include: training couples through video tape feedback, to interact adequately while analyzing problems and proposing solutions (e.g., Margolin and Weiss, 1978; Eisler, et. al., 1973). Verbal or written feedback has also been used in marital therapy (e.g. Carter and Thomas, 1973; Liberman, Et. Al., 1976). The application of these procedures is generally preceded by providing the distressed couples with direct verbal or written instructions as to how to improve their interaction skills and their strategies for analyzing marital problems (e. g. Peterson and Frederiksen, 1973; Jacobson, 1977).

General Results

Esperimental results in this area have widely varied in size and consistency. Often, research conclusions seem stronger than they should because of either peculiar interpretations of statistical analyses, or due to the lack of standards for estimating the clinical or social importance of results. In the same line, some authors seem to assume that statistical hypothesis testing, a tool designed to estimate the probability of occurrence of results in terms of their *size*, is aqually funtional for detecting the results' experimental *source* (Sidman, 1960). Some examples of these studies include those by Liberman, et. al., 1976, and Margolin and Weiss, 1978). Concerning the size of results, some have been both large and relatively consistent (e.g. Stuart, 1969, O'Leary and Turkewitz, 1977; Peterson and Frederiksen, 1977), and some, small and inconsistent (e.g. Goldstein and Francis, Note 1). In other cases, the presentation of data does not allow for an easy estimation of results. Some suthors even fail to show the entire range of variation on the ordinate axis of graphs and simultaneously fail to mention the real proportion of change on the text (e.g. Azrin, et. al, 1973).

In general, operant procedures have shown to be highly effective in reducing marital distress. Studies comparing procedures derived from other psychological conceptions with those derived from operant principles (e.g. Margolin and Weiss, 1978; Liberman, Et. Al., 1976) have consistently shown the superiority of the behavioral approach to this problem area. Very few experiments have made component analysis of operant packages in marriage counseling, that is, an analysis of the relative contribution of specific independent variables. Eisler, et. al. (1973) compared the effects of plain TV watching, with those of video tape feedback on discussion skills and video tape feedback plus specific instructions, showing the superiority of this last combination. Other study (Margolin and Weiss, 1978) showed that a combination of procedures to change behaviors and procedures to change attitudes was more effective than the isolated contribution of each type of procedure by itself.

Methodological Problems and Suggestions

The methodological shortcomings of behavioral studies on marital therapy

are certainly not much different from those shown of analyses of other applied areas. However, marital interaction seems to create a particular (and understandable) reluctance to systematic recording by outside observers (Sánchez-Sosa, Note 3). O'Leary and Turkewitz (1978) systematically described some of the most common methodological errors contained in research papers on both child and marital treatment research. According to this account, some of the most frequent are: unsubstantiated diagnoses or client labels, too few therapists per treatment condition, lack of reliable dependent measures, lack of validity of independent procedures and incompetent experimental designs.

Other research contaminants that have also plagued research efforts in this area include: subjects assigned to group comparisons are not comparable due to the absence of pretreatment matching methods (MacGuigan, 1960). Experimental effects can also be contaminated by personal biases while recording behavior, while applying independent procedures or by an "expectancy" effect on the subjects themselves (Rosenthal, 1966). This is also applicable to the absence of reliability checks because personal biases could sometimes be detected by the use of independent observers of the behavior of both, the subjects and the experimenters and observers. This is particularly feasible in those studies that generate permanent products of behavior such as audio or video recordings.

Suggestions for controlling these confoundings seem straightforward:

- 1) Select and define target behaviors assuring that the selection is valid in terms of the opinion of the distressed couples themselves. Also, make sure behavior definitions are in terms of observable physical events whenever possible. If this is not practical or useful, use psychometrical instruments which have already been validated. If you build them yourself, assess their validity through some of the better researched validation procedures (e.g. Edwards, 1957; Anastasi, 1982).
- 2) Devise independent treatments which in fact reflect the technological procedures from which they were derived. Also, try to assure that the subjects get actually exposed to such procedures.
- 3) Use within-subject comparisons or designs whenever possible. They control for a number of confoundings such as subject comparability, history and maturation. If practical reasons impose the use of group comparisons, make sure subjects are comparable in terms of performance on the dependent variable itself. If this is not advisable because you suspect that pretesting could affect later performance, match them on a variable that correlates high with the dependent variable (MacGuigan, 1960).
- 4) Make sure experimenters, observers and recorders are as naïve as possible concerning expected results or experimental design. If this is difficult to attain, have additional naïve and independent observers make reliability checks on both, dependent measures and the behavior of experimenters.
- 5) Be cautious utilizing statistical treatment for your data. If an experiment is well designed and run, and very few contaminants are likely to obscure results, statistical treatments are rarely necessary (Sidman, 1960).

TABLE 1

		STUMBT	GOLDSTEIN AND FRANCIS	MACLESTER AND THOMAS	ALVIN ET. AL.	EISLER ET. AL.	PATTERSON ET. AL.	LIBERMAN ET. AL.	PETERSON AND FREDERIKSEN	JACOBSON	O'LEARY AND TUNNICLIFFE	MAROLIN AND GILLY
SUBJECTS, NUMBER OF COUPLES AND LEVEL OF DISTRESS		4 medium	5 mild	12 medium	12 medium	12 severe	12 mild	9 medium	6 severe	10 mild	10 medium	27 medium
DEPENDENT MEASURES	PSYCHOMETRIC-TYPE INSTRUMENTS	M A S	*					*		*	*	*
		A - C									*	*
		M H S			*				*			*
		OTHER						*				*
DEPENDENT MEASURES	DIRECT OBSERVATION	MICS				*	*		*		*	*
		RECORDING SHEETS	*	*	*	*			*	*	*	*
		VIDEOTAPE				*	*	*	*	*	*	*
		AUDIOTAPE		*								*
INDEPENDENT PROCEDURES	WRIST COUNTER		*			*						*
	TRAINING ON DEFINING	*		*	*			*		*	*	*
	CONTINGENCY CONTRACTING	*		*		*	*		*	*	*	*
	TRAINING ON DISCUSSING			*	*	*	*	*	*	*	*	*
	INSTRUCTIONS		*		*	*	*	*	*	*	*	*
	VIDEOTAPE FEEDBACK				*	*	*	*	*	*	*	*
	MODELING						*	*	*	*	*	*
	OTHER FEEDBACK			*	*		*		*	*	*	*
	REINFORCEMENT	*	*						*	*	*	*
	CUEING SYSTEM			*								*
	PROMPTING						*					*
	READING ASSIGNMENTS									*		*
	COUNSELOR'S EXPLAINING	*		*								*
	MUTUAL DATA EXHIBITION	*	*		*							*
EXPERIMENTAL DESIGN	WITHIN SUBJECTS	*	*	*	*	*	*	*	*	*	*	*
	GROUP COMPARISON				*		*			*	*	*
METHODOLOGICAL CONTROLS	SUBJECTS COMPARABILITY	+	+	+	+	+	-	+	+	+	+	+
	RELIABILITY (X)	-	-	-	-	98%	>70%	?	-	>70%	-	>70%
	EXPERIMENTER'S BIASES	-	-	?	-	+	-	+	-	-	+	-
	OBSERVER'S BIASES	-	-	-	-	-	-	+	-	+	+	-
	SUBJECTS' BIASES	-	-	-	-	-	-	?	+	-	?	+
	VALIDITY OF MEASURES	+	-	?	?	+	+	+	+	+	+	-
	HISTORY	+	+	+	+	+	+	+	+	+	+	+
	MATURATION	-	-	-	+	+	-	+	+	+	+	-
RESULTS SIZE (ESTIMATED)	medium	small	large	medium	medium	medium	small	large	medium	small	*	

KEY

- * STUDY INCLUDES THIS FEATURE
- + STUDY CONTROLS FOR THIS CONFOUNDING
- STUDY DOES NOT CONTROL FOR THIS CONFOUNDING

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