

Brief

Family-Interactional Therapy in the Management of Cardiac-Related High-Risk Behaviors

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This exploratory study examined the role of family interaction in structuring and maintaining high-risk behaviors in difficult-to-manage patients with heart disease and the use of time-limited, social systems-oriented therapy to modify such behaviors. The study was based on the assumption that "difficult to manage" patients with heart disease, ie, those who failed to modify their high-risk behavior patterns following a cardiac event — and their families, in their attempts to deal with the threat of heart attack, would interact with one another in a manner which would maintain, however unintentionally, the patient's high-risk behavior pattern.

Nine such "difficult heart families" were referred to the project. In each case the patient's wife was seen individually for a maximum of five clinical interviews for the purpose of modifying her method of dealing with, and presumably maintaining, her husband's high-risk behaviors. Contact with the patient with heart disease was minimal and used for information-gathering only. In each case, when the wife made the prescribed changes in dealing with her husband, a desirable change in one or more of his high-risk behaviors followed.

Numerous coronary-related "risk factors" which the individual can control, such as dieting, smoking, exercising, and the competitive, time-harried "Type A" behavior described by Friedman and Rosenman,^{1,2} are believed to be implicated in coronary artery disease (CAD). While the relative importance of each and the relationship of these various factors to one another and to CAD remain a subject of speculation, it is generally agreed that once CAD has been diagnosed, the patient must modify his life-style, ie, his high-risk behaviors, if he is to prevent a worsening

of his heart condition. Nonetheless, a significant number of patients with heart disease — including those with a history of the most severe symptoms — fail to make such changes. Dealing effectively with such difficult-to-manage patients is a serious problem confronting physicians and, more recently, behavioral scientists.

Common to all past reported efforts to deal with this problem has been the assumption that the problem of heart disease lies within the patient, with the primary focus being on the dynamics of the patient's personality structure and its relationship to the patterns of bodily dysfunction being observed. There has been little more than a tentative recognition of the possibility of approaching CAD — or for that matter, other disease entities conventionally seen as organic in nature — from a family or social interaction perspec-

tive, in spite of the obvious impact which the family has on the individual throughout his lifetime.^{3,4} In the exploratory work reported below, a fundamental shift in focus from the individual patient as the unit of study and treatment to the interaction *between* the patient with heart disease and his wife was examined.

The study was based on the assumption that difficult-to-manage patients with heart disease, ie, those who failed to modify their high-risk behavior patterns following a life-threatening cardiac event — and their families, in attempting to deal with the threat of heart disease — would interact with one another in a manner which would maintain the patients' high-risk behavior patterns.*

Conversely, "non-difficult" patients (those who had modified their high-risk behaviors) and their wives would interact with one another in a manner appropriate to modification of the patients' coronary-prone behavior. It was hypothesized that the wife's attempts to change her husband's high-risk behaviors following a cardiac event was a key factor in the maintenance of such behaviors and that if her behavior could be appropriately altered, a modification of the patient's behavior would follow.

Method

The patients included in the project were obtained through physicians in the Palo Alto, California, area. The physicians were asked to refer families in which they had found the heart patient to be among their *most* difficult-to-manage patients. The patient's lack of cooperation with the prescribed medical regimen, lack of satisfactory progress in changing his physical condition and/or repeated complaints and concerns from his spouse as to the nature of the patient's high-risk behavior in the home were indicators. Other than these somewhat

*In therapeutic work involving a wide range of human problems seen by the Brief Therapy Center at the Mental Research Institute (MRI) in Palo Alto, California, it has been observed that quite often the attempted solutions employed by the "identified patient" and/or others in his social system act to maintain or exacerbate the original difficulty. In effect, the attempted solution becomes the problem. Further elaboration of this theoretical position can be found in Watzlawick P, et al, pp 31-39.⁵

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general guidelines, the criteria for evaluating a patient as "difficult" were left to the discretion of the referring physician. This approach was followed not only in order to better meet the physician's clinical needs, but also to gain insight into the types of patients and problems which the physicians found difficult, as well as an impression of how they chose to deal with such patients.

To be eligible for the project, patients also had to meet the following criteria: (1) the patient had to have been clinically diagnosed as having CAD; (2) the patient had to have been explicitly warned by the referring physician to modify his high-risk behaviors; (3) the patient had to be living with his spouse; and (4) the patient's most recent hospital discharge for matters related to CAD must have occurred at least one month previous to the time of the family's first contact with the project. This time period was imposed to allow for "re-normalization" of the family's interactive pattern.

Once the name of a family was obtained, the patient's spouse (in all cases, the wife) was contacted and informed of the nature of our service — that we could provide brief (five-hour maximum) counseling designed to help her modify her husband's coronary-prone behavior, and that contact with her husband would be minimal, if any.

The clinical process with each wife included three main phases. During the first phase the *specific* (behavioral) nature of the patient's high-risk behaviors of concern to his wife were identified, as were her attempts to modify or deal with these. In addition, each wife was asked to indicate a *minimal behavioral change* which, if it were to occur, would indicate that a significant first step had been taken in dealing with her husband's behavior. Contact with the husband also occurred at this point, if this was agreeable to both husband and wife and would not interfere with realizing the goals of treatment. Such contact was used for information-gathering purposes, eg, to verify the wife's report.

During the second phase, the focus was on modifying the problem-solving behaviors being used by the wives to deal with their husbands' high-risk behaviors. The rationale for this treatment approach was based on the afore-

mentioned assumption, that even the best intended problem-solving efforts often maintain or even exacerbate human problems. Thus, if such efforts were to stop or to be modified in a prescribed manner, a change in the high-risk behaviors might be expected to follow.

The final evaluation phase of the project occurred approximately one month after the last treatment contact and involved a telephone contact with both wives and referring physicians. The wives were asked to report on two main areas: (1) had they carried out the suggested changes in their own problem-solving behaviors, and if so, (2) had their husbands' high-risk behaviors changed for the better, remained the same, or worsened? The referring physicians were asked to evaluate behavioral changes in their patients. At the time of the referral, each physician had been asked both to identify those behaviors of most concern to him and to describe what a minimal but significant change in the patient's behavior might look like. At the time of the one-month follow-up, the physician was also asked if the patient had demonstrated any change in his high-risk behavior for better, for worse, or not at all.

To date, nine difficult-to-manage patients and their wives have participated in the project. Table 1 summarizes the diagnoses and high-risk behaviors reported for each patient at the time of referral to the project.

Before turning to a discussion of the results of our work with these nine families, the following case summary is presented in order to more specifically illustrate the clinical rationale and procedures employed in the project.

Case Summary: Heart Family 4

Family Members

Mr. A was 41 years old and his wife 39. Both had attended two years of college and had no religious preference. He had been retired from a public service job following his by-pass surgery and had remained unemployed to date. Mrs. A had recently held a part-time clerical position, but was currently unemployed. The exact fam-

ily income was not mentioned but was primarily dependent on disability pay. They had two teenage children living at home.

Medical Information

Mr. A:

CAD History: Underwent coronary artery by-pass surgery in early 1973.

Current CAD Symptoms: Anginal pain, arrhythmias, dizziness, fatigue, and shortness of breath.

Current Risk Factor Status: Mr. A did not smoke, and his cholesterol was being controlled with medications and diet. He was overweight by approximately 20 to 25 lbs and was not exercising.

Other Health Problems: Mrs. A reported that her husband had arthritis, depression subsequent to his heart surgery, and a tendency to be hypochondriacal.

Mrs. A reported that she and the children had no significant health problems.

Referral Information

Referral Source: A community-based cardiac rehabilitation program.

Referral Process: Mrs. A had expressed concern regarding her husband's behavior. The family's name was subsequently forwarded to the Family Heart Project and Mrs. A was contacted.

Family Understanding of the Referral: Mrs. A wanted help in coping and adjusting to her husband's illness and guidance in helping her husband to adjust "mentally" to his heart problem. Mr. A was unwilling to cooperate but was agreeable to our meeting with his wife.

Referral Problems: Mr. A was 25 lbs overweight. Weight was listed as the main problem by the physician. In addition, Mr. A was not exercising, was adjusting his own medications, and was "chronically depressed" since his heart surgery.

Wife's Presenting Complaint

Heart-Related Problems: Mrs. A listed her husband's depression as the problem of most concern to her, eg, "Since his surgery, he has just been sitting, waiting to die." She also listed his weight and lack of exercise as problems, but saw these as related to the depression.

Other Problems: Mrs. A felt "anxious" and "panicky," especially with regard to being able to do the "right thing" if confronted with a cardiac emergency.

Attempted Solutions and the System's Feedback Loop

Wife's Behavior and Rationale: Mrs. A described herself as "optimistic" and with a tendency to encourage and point out the positive side of things to her husband in response to his "pessimism and depression." Her behavioral repertoire was based on the assumption that, if someone is down, it is best to cheer him up.

Husband's Behavior and Rationale: Mr. A was not interviewed, but judging from Mrs. A's description, he tended to vacillate between verbal optimism, ie, "I should exercise, diet," — and verbal despair — "What's the use. I am going to die anyway." He took *no action* with respect to dieting, exercising, or other activities.

Significant Others: The cardiac rehabilitation staff was operating in the same basic way and on the same assumptions as Mrs. A. Mr. A's heart surgeon, on the other hand, was "pessimistic" and "stern" with him, eg, "Continue as you are and you are going to shorten your life even more."

System's Feedback Loop: The more depressed Mr. A became, the more Mrs. A and the rehabilitation program's staff would try to cheer him up and encourage him. Likewise, signs of optimism from Mr. A were met with increased encouragement from his wife. Mr. A made no positive change in his high-risk behaviors in response to either of these general problem-solving behaviors, but instead either stayed the same or became more depressed. In general, the more things failed, the

harder they tried. The surgeon, on the other hand, with his "pessimism," was able to get Mr. A to lose weight and exercise for approximately six months, at which time their contacts became less frequent.

Goals

Wife's Goals: She felt that "improving his attitude" was the most important goal. For Mr. A to go back to work or school and/or find a hobby would, she believed, be an indication of this attitudinal change. She wanted Mr. A to lose weight or at least to take action in this area, as opposed to continued talk about his need to diet and for him to return to the cardiac exercise program.

Therapist's Goals: These were the same as Mrs. A's, with the main focus on the first.

Treatment Strategy

To get Mrs. A to stop optimistically encouraging her husband to exercise, lose weight, find interests, etc, and, rather, to become pessimistic with regard to his chances for improvement and/or compliance with his medical regime, and in general to make things harder for him.

Major Interventions and Behavioral Reactions

Session 1: Mrs. A's anxiety was most apparent in this session. In the case of a cardiac emergency, she wanted to act appropriately. She was afraid that she might overreact, eg, take her husband to the hospital unnecessarily. She felt sure that her husband would be critical if she "goofed." She was asked to recall the birth of her first child and how her husband behaved at that time. She appeared more relaxed as she recalled her husband's anxiety and overreaction to her labor pains.

Session 2: Mrs. A was ending her employment and looking forward "to really getting *our* [her and her husband's] diet and exercising started. With me home, I know he will be happier and he has been excited about beginning the diet." This well-meaning, but problem-maintaining, behavior was countered by the therapist with: "You've been the breadwinner now for two years. Your husband has become accustomed to keeping the house. Adjusting to your new roles is bound to take time. Therefore, we suggest taking only one step at a time. We would recommend that you place a moratorium on changing or beginning anything new this week and instead simply enjoy being together and adjusting to your new life. Take a vacation, sleep late, and eat well! Mr. A asks about the diet or exercise, explain this to him and add that 'Next week is soon enough to begin.'" Mrs. A agreed that this made sense.

Session 3: Mrs. A took the suggested "vacation" and reported that Mr. A went along with it, albeit reluctantly. He repeatedly stated his interest in losing weight and exercising. In keeping with her basic position, she was eager to oblige her husband's wishes in the upcoming week. She was encouraged not to do this and appeared to understand that, to do so, would once again result in his "backing off" and becoming more depressed. We suggested, this time explicitly, that she "drag her heels" with regard to dieting and exercise and, in addition, to agree with any pessimistic statements that he might make. She agreed to carry out these suggestions.

Session 4: Mrs. A had carried out the assignment well. Mr. A continued to ask about the diet and exercising, but took no action himself. Mrs. A continued to have difficulty believing that no action on her part was powerful action in and of itself. She was reinforced to continue "dragging her heels" and to add pessimism of her own — "We both know that your intentions are good, but let's face facts; we both know you won't really be able to stick to a diet or exercise program. Therefore, why try?"

Session 5 (three weeks later): Mrs. A had again carried out the assignment relatively well. She reported that Mr. A had begun dieting on his own, and

Table 1. Patient Diagnoses and High-Risk Behaviors at the Time of Referral

Families	Diagnosis	Cigarette Smoking	Blood Fats	High Blood Pressure	Lack of Exercise	Obesity	Type A Behavior	Others
1	MI	X	X	X			X	
2	MI	X	X		X	X	X	Excessive Drinking
3	MI				X	X	X	Excessive Drinking
4	S		X		X	X		Depression
5	MI	X	X		X	X	X	
6	SA		X		X	X	X	
7	SA		X			X		
8	MI	X			X		X	
9	MI					X	X	

"Type A Behavior" refers here to overwork, tension and/or habitual explosive anger; "MI" to myocardial infarction; "S" to by-pass surgery; and "SA" to severe angina.

she believed that he had lost weight judging from his appearance. Her good work was reinforced and she was warned to expect normal set-backs.

Follow-up Results

Wife's Report:

It was ascertained that Mrs. A had continued to behave in the suggested matter vis-a-vis her husband.

"When you first came to the Family Heart Project, you were concerned

about your husband's attitude. Is that the same, better or worse?" "Better. He's taking an interest in things again." She cited as an example of this improvement the fact that he had gone on a week-long fishing trip without her. Previously, he had remained at home or went out only with her.

"You were also concerned about his weight. Has his weight gone down, stayed the same or increased?" "Gone down. He has been dieting on his own for a month, though I'm not sure how much he has lost. He looks better."

"You were also concerned about his lack of exercise. Is this the same,

better or worse?" "Better. He now is working in the garden and riding his bicycle."

"Have any new problems arisen in the family since our last contact?" "No. He's complaining more about being bored and wanting to get out, but I know this is what we want. Anyway, I haven't bailed him out."

"Have any old problems not worked on directly cleared up since our last contact?" "No."

"Have you sought any additional help in dealing with your husband's behavior?" "No."

Referring Physician's Report: There

Table 2. Status of Wives' and Heart Patients' Behaviors at the Time of the Follow-Up

Family	Status Wives' Behaviors	Status of the Heart Patients' High-Risk Behaviors						
		Cigarette Smoking	Blood Fats	High Blood Pressure	Lack of Exercise	Obesity	Type A Behavior	Others
1	PC	S	UK	UK			B	
2	PC	S	UK		S	S	B	B
3	C				B	W (+5 lb)	B	B
4	C		UK		B	B		B
5	PC	B	UK		S	S	B	
6	PC		UK		S	B (-6 lb)	S	
7	C		UK			B (-9 lb)		
8	NC	S			S		S	
9	NC					S	S	

The abbreviations used above refer to: Desirable Change (C); Partial Change (PC); No Change (NC); Unknown (UK); Better or Improvement (B); Same (S); Worse (W).

had been no further contact with the family since the referral was made.⁶

Results and Discussion

The results of the study supported the hypothesis that the wife's attempts to modify her husband's high-risk behavior play a role in maintaining these behaviors, and that effecting a change in her problem-solving behavior will lead to a modification in the family system and, thus, in her husband's behavior. In seven of the "difficult" cases (Families 1 through 7 as listed in Tables 1 and 2), suggested

changes in the wives' behavior occurred and were accompanied by subsequent desirable changes in the husbands' coronary prone behavior. In the remaining two "difficult" cases (Families 8 and 9), changes in the wives' behavior were not effected and, as expected, no change occurred in the husbands' behavior. In Table 2, both the status of the wives' problem-solving behavior and the high-risk behavior of the husbands one month after treatment are summarized.

The changes in the husbands' high-risk behaviors were limited. In each case, only partial changes were reported within one or two such behaviors, among the usual three or

four requiring modification. The implications of these changes are nonetheless considered significant for the following reasons: they occurred as a consequence of very limited treatment exposure, without the cooperation or the presence of the heart patient and in families which had previously experienced little or no success in modifying these behaviors. Furthermore, in each case, the desirable change(s) which occurred, did so in the high-risk behavior described by the wife as of *most concern* to her and within the suggested context that such change, if it were to occur, would represent only a "significant first step" in the elimination of the problem —

not an end product. To the extent that this suggested definition of change was accepted, modifications in the husband's behavior, albeit minor, could be taken by the wife as an indication that her problem-solving behavior was meeting with success — thus, setting the stage for the continued use of her new behavior and a beneficial shift in the family system.

The significance which can be attributed to these findings must also be weighed against such factors as limited sample size and the brief amount of time allowed between the end of treatment and the follow-up evaluation. The findings are, nonetheless, substantial enough to suggest that continued research of the post-cardiac event adjustment of families from an interactional perspective could prove useful.

Conclusions

Due to the predominantly individual focus and implied linear cause-effect model subscribed to in most cardiac prevention and rehabilitation programs, attempts to modify high-risk behavior have consistently proven unsatisfactory when the heart patient was unwilling to cooperate — for whatever reason — with treatment. The social interaction model used in this study, with its focus on problem-maintaining behaviors and feedback loops, proved to be a useful conceptual tool for dealing with this clinical difficulty. Most significant was the finding that the clinician need not be bound to the direct treatment of the individual patient for modification of high-risk behavior to occur: one-to-one counseling of the patient's wife, in which prescribed changes in her behavior vis-a-vis her husband were initiated, was sufficient for bringing about a change in the patient's behavior. The therapist, in dealing with such cases, has the option, therefore, of working

with the family members most likely to be accessible to change — thus, improving the chances for an efficient and successful outcome to treatment.

The findings of the present study suggest other clinical advantages to be gained by the application of the interactional perspective to the problem of risk factor modification in difficult patients. (1) Because this therapeutic approach does not focus on the modification of specific high-risk behaviors per se, but rather on those family behaviors which are believed to be maintaining the high-risk behavior, changes in family patterns of interaction can lead to modification in more than one high-risk behavior. This is particularly advantageous in working with patients who are at risk in a number of areas and not likely to tolerate multiple therapies. (2) Modification of behavior can occur rapidly, especially, but not exclusively, in those cases in which the wife is motivated to change her husband's behavior. (3) With the focus on how the behaviors in a particular family act to maintain the "problem behavior," the therapist is in a better position to establish ongoing, implicit social reinforcement of the desirable behaviors. It is the belief of this author that this crucial factor is often lacking in therapy which, while successful in changing behavior in the controlled milieu of the therapist's office, fails to sustain such change when the patient is returned to an unchanged family system.

The role of social interaction and its potential for structuring and maintaining high-risk behavior need not be confined to the family system, as in this study, but might extend to other social systems as well. The doctor-patient relationship would appear to be especially important in this regard, due to the significance which is attributed to it by both patient and doctor, when a life-threatening disease such as CAD has been diagnosed. Especially in those cases in which the patient has proved difficult to manage and in which the medical personnel charged with the patient's care have become concerned and/or attempted numerous unsuccessful approaches, an evaluation of the interaction between doctor and patient would appear to be in order. Well-meaning, but nevertheless problem-maintaining behaviors on the part of the physicians were

observed, although not systematically investigated in the course of this study.

It is likely, too, that the effects of social interaction on CAD are not confined to the post-cardiac event phase of the illness, or to those high-risk behaviors which lie under the direct voluntary control of the patient. The bulk of CAD research has focused on factors which are believed to create stress on the cardiovascular system, thus predisposing the individual to the development of CAD. It is not inconceivable, however, to imagine social interactional patterns operating in such a manner. Friedman and Rosenman, for example, hypothesize that "Type A Behavior Pattern" produces stress on the individual, but such behavior might well be found to represent a "Type A" interaction — as opposed to an inherent personality characteristic. The "double-bind" interactional pattern⁷ and other, as yet unidentified, no-win interactional situations probably influence bodily functioning as well, and could be found to correlate with the development of CAD.

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