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A behavioural and systems approach to family therapy: a position paper

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An integrated model of a behavioural and systems-approach to family therapy is presented, the main premise being that family interactions are affected by reciprocal determination of cognitions, feelings and behaviours in relation to the environment. Assessment involves a systematic exploration of the interaction and transactional patterns within the family, and the identification of the dysfunctional aspects of such patterns. The main aim of the intervention is to produce change in family behaviour by addressing the important cognitive and affective issues. This entails techniques such as cognitive restructuring, social modelling and operant conditioning which can be used separately, in parallel, or in combination. Whether one or more of these techniques is used depends on the nature of the family's problems and the aims of treatment.

Theoretical bases

Introduction

Focusing on the crucial interactions within the family often forms an important basis for the understanding and treatment of children and their families. One of the basic concepts relating to the interactions and transactions of the family has been in terms of a systems model. Such a model takes the view that objects interact with each other as a system or in terms of subsystems in a dynamic manner, and although there are boundaries between the subsystems these are not rigid or impermeable but are flexible and reciprocally influence each other (Barker, 1981). Assessment and treatment are therefore usually directed towards analysing and modifying the family systems.

Clearly, there are various established approaches to family

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play, interpersonal conflicts, biological functions (e.g. toilet training), physically dangerous situations and school attendance and behaviour.

Although the emphasis is on identification of problems related to the family systems, according to the six areas mentioned above (systems problems), it is important to bear in mind other relevant problems, which can be classified as follows:

(1) Presenting problems: reported by the family members as being the reasons for referral.

(2) Problems perceived by the family: additional problems which emerge during the course of the assessment.

(3) Problems perceived by the therapist.

Behavioural analysis

Following the identification of the systems and relevant problems, the therapist proceeds with a behavioural analysis of each of the important identified dysfunctional area(s). Thus, there is a shift in emphasis from an exploration of the family functioning as a whole (macro-analysis) to an exploration of the component problems (micro-analysis), but always within the framework of the family system. This comprises three steps:

(1) To identify and describe the salient component problems within the dysfunctional area(s), e.g. identifying those important cognitions, behaviours and feelings of the family member(s) that are relevant to the particular events.

(2) To determine the events which have preceded the important behaviours relevant to the component problems. Particular attention is given to the antecedent factors or events, which are usually related to the immediate past but sometimes relate to the more distant past.

(3) To determine the events (consequent factors) that follow the problem behaviour and the significance these may have in maintaining or exacerbating the presenting problem.

As part and parcel of the assessment, a *baseline* of the problems (in terms of criteria such as severity, quantity and frequency) is noted to help establish how much change may have occurred at the end of therapy.

Explanatory and hypothesis-generating stage

By the end of the family assessment stage, the therapist should have a clear understanding of the presenting, perceived and systems problems. On the basis of this information, he/she will then offer an explanation of how the problems relate to the family dysfunction, bearing in mind other possible contributing factors. One of the aims is to help the family members to view any symptomatology as having a basis in the family's relationships and transactions with one another, rather than as a problem which lies within the child alone. In the process of exploring the family system, it is important for the therapist also to establish *whose behaviours* are most directly related to *which areas of dysfunction* and in *what way*, and to *what extent*. This includes the assessment of significant environmental factors.

A family with two children was referred because the older, twelve-year-old girl was being verbally and physically aggressive within the family, especially towards her father, resulting in the parents feeling totally helpless. The assessment revealed that the mother was reinforcing the girl's difficult behaviours by giving in, and, at the same time, contradicting the father in his attempts to manage the girl's behaviour (behaviour control dimension); the mother was also making frequent derogatory remarks about him, thus affecting the girl's attitude (cognition) towards the father. His persistent failure to control his daughter, on the one hand, and the effect of the mother's interference and comments, on the other hand, led him to view (perception/cognition) his rôle in the family as being ineffectual despite his efforts to assert his authority (rôle dimension). (Clearly, there are other issues which are present in the above example, but for the sake of brevity we have focused on only some of them.)

Treatment stage

Description of methods

There are a variety of behaviour methods which are available for use in the treatment of problem behaviours. The choice of method is determined by the assessment and identification of the important component problems relative to the dysfunctional systems of the family. Clearly, there is no straightforward formula for deciding on the 'right' technique. The guidelines are broadly influenced by a number of factors: the theoretical bias of the therapist, the selection of data during assessment, and the generating and testing of hypotheses (Linehan, 1980).

assessment and therapy (Gurman and Kniskern, 1981). One of these approaches is the McMaster model which provides a systematic way of exploring family functioning according to six delineated dimensions (Epstein and Bishop, 1981). We consider it to be an effective assessment procedure; it is a well-defined and reasonably economic method for exploring and understanding family functioning. This is a view supported by others (Gurman and Kniskern, 1981; p. 452). Although the systematic evaluation of the six areas of family functioning and the setting of tasks and goals lend themselves to the implementations of behaviour principles and techniques, such techniques have not been clearly delineated. This paper addresses these issues by embracing an integration of behaviour and cognitive approaches within the framework of the family system. Such an approach is consistent with the view outlined some years ago by Douglas (1979) in which the author points out the potential for integrating behavioural strategies into a systems analysis of family functioning.

Incorporating a behaviour framework

Behaviour therapy represents a treatment approach which embraces the assumption of the crucial importance of learning and environmental influences in the development and maintenance of many of the maladaptive behaviours which are brought to the attention of professionals for help. However, there are recognized different views about how maladaptive behaviours are assumed to develop and what techniques might be used as the basis for promoting change (Wilson and O'Leary, 1980). For example, there is the well-known and rather radical emphasis by Skinner (1953) on overt responses and reinforcements (operant conditioning) procedures as the basis for explaining and modifying maladaptive patterns of behaviour. This approach has been used effectively within the family context in which parents have been enlisted as co-therapists in modifying their child's problem behaviours (Berkowitz and Graziano, 1972; Herbert, 1981; O'Dell, 1974; Patterson and Guillon, 1968). Another important development has been witnessed in the form of cognitive therapy (Beck, 1976; Ellis, 1970; Mahoney, 1974) which attributes many problem behaviours to faulty and distorted thinking, the latter being amenable to change through techniques such as systematic cognitive restructuring. Indeed, each of these approaches has become established in its own right as a major form of behaviour therapy but their

conceptual bases are characterized 'by a primary emphasis on one dimension of psychological functioning to the relative neglect of the others' (Wilson and O'Leary, 1980; p. 16).

A broader and more viable conceptualization of behaviour modification has been proposed by Bandura (1977, 1983). This is characterized in his social learning theory, which postulates that a person's adjustment is part of a three-way interaction between behaviour, environmental events and personal factors (including perceptual and cognitive influences) in terms of what he refers to as *reciprocal determinism*. Cognitive processes are deemed important because they determine what environmental influences are attended to, how they are perceived and whether they might affect future behaviour. Bandura's theory attaches much importance to the process of learning by watching and imitation of the behaviour of others, so-called 'observational learning'. This type of learning is regarded as central to the acquisition of new information and skill of simple and complex varieties, and to altering previously established behaviour. Furthermore, such learning involves direct and vicarious effects and can occur without the influence of reinforcement. On the other hand, although reinforcement is not necessary for learning to occur, it does have considerable influence on performance. In short, Bandura distinguishes between acquisition and performance in behaviour and argues that although a behaviour may have been acquired (learned) and stored in memory, it is only likely to be performed in the event of anticipated or actual reinforcement. Although Bandura's model has been applied mostly in individual therapy settings, it has attracted family-orientated therapists and we see this as having important implications for systems family therapy (Jacobson and Margolin, 1979; Rappaport and Harrell, 1972).

A main assumption is that problem behaviour in a child may be the result of dysfunction within the family system and that such behaviour may be exaggerated and/or perpetuated by the dysfunction. In terms of this assumption, a systematic exploration of the patterns of interactions between the members of the family is assessed according to the six areas of the McMaster model. Briefly, this entails examining which of these areas are dysfunctional in relation to the presenting and other problems. The dysfunctional area(s) is(are) then subjected in turn to a further analysis along behavioural lines for the purposes of establishing more clearly the factors which may be exacerbating and/or maintaining the problems (the nature of the problems and the relevant contingencies). On the basis of the information obtained, the

therapist provides a formulation or understanding of the problems in family terms and advances treatment hypotheses. The treatment strategy is planned using a variety of behavioural and cognitive procedures and techniques aimed at improving patterns of transactions within the family system.

Description of the behavioural and systems approach

The stages of our model are as follows:

(1) Preliminary assessment—is family therapy indicated?
(2) Family assessment.
(3) Explanatory and hypothesis-generating stage.
(4) Treatment stage.
(5) Termination and follow-up.

Preliminary stage—is family therapy indicated?

The purpose of the preliminary exercise is to establish whether family therapy is indicated and whether the family is suitably motivated. After referral, parents are invited to attend the first interview. Basic descriptive data are collected about the presenting problem(s). This is supplemented by information which takes into account additional factors including personal history of the identified patient, details of personality, progress of school work, information about family members and other key figures in the family system, and relevant medical history (in order to eliminate any organic factor which might be masquerading as a psychiatric condition). Such information is usually obtained during interview with parents alone.

Subsequently, the interviewer should be in a position to evaluate the parents' motivation for therapy and to discuss with them the various options, including family therapy. If family therapy is decided upon and the parents agree to it, the whole family is invited for family assessment.

Family assessment stage

This stage is based on the McMaster model (Epstein and Bishop, 1981; Epstein *et al.*, 1978) with modification of some of the concepts and definitions in order to make them more suitable for use in a U.K. setting. It concerns itself with the pattern of family functioning in six specific areas followed by behavioural analysis. A brief description of the six areas of family functioning is as follows:

Coping and management abilities. The family's ability to cope with and to manage day-to-day problems. Three main types are differentiated: (1) practical problems, such as management of family finance, decisions about household management, holidays, etc.; (2) emotional problems, such as managing angry, unhappy, resentful feelings within the family; (3) school/work problems, such as being aware of and sensitive to the child's academic, behavioural and social adjustments at school and parental concerns regarding their own work.

Communication. The style and way in which the family members interchange messages. Communication is assessed as to whether it is direct or indirect — and also whether it is *clear or masked.* Some authorities, including Epstein and Bishop (1981), are reluctant to focus on the non-verbal form of communication. However, we consider that the therapist should note these non-verbal communications, particularly with children, and—if relevant—should include them in the assessment.

Affective responsiveness. The family members' emotional reactions to events, issues and people that impinge on the family system. Such reactions are assessed according to how appropriate they are to the particular influences and how strongly they are felt.

Affective involvement. The extent of emotional involvement by family members with each other in respect of values, concerns and interests. It is important to establish both the degree (e.g. minimal to excessive) and also the appropriateness of the involvement.

Family rôles. The way in which individual members of the family fulfil their traditional functions according to their gender, status and positions within the family, and also according to the expectations of their culture. Consideration is also given to the various rôles within the family. For example, *parental rôles* (provision of material, emotional and social resources and guidance), *spouse rôles* (sexual gratification, companionship and support for each other), *sibling rôles* (companionship and support for each other), etc.

Behaviour control. The family pattern for managing day-to-day behaviour of the children. Consideration is given to rules regarding

In keeping with the concept of the social learning theory (Bandura, 1977), a number of important behaviour methods may be considered. In this introductory outline to behavioural treatment methods in family therapy we have addressed only the broader and better known techniques. These include: (1) cognitive change methods; (2) operant conditioning methods; (3) modelling methods.

Cognitive change methods

The approach explores the inner experiences, such as the thoughts, attitudes, feelings and beliefs of the family as a basis for modifying the family dysfunction. This approach, of which there are several variations (Beck, 1976; Ellis, 1970; Mahoney and Arnkoff, 1978), is sometimes referred to generically as cognitive restructuring and among the important newer developments in the field of behaviour therapy (Foreyt and Rathjen, 1978; Wilson and O'Leary, 1980). A basic assumption of the cognitive restructuring method is that cognitive processes, to a lesser or greater extent, influence what we observe, feel and do at any particular time. Another important assumption is that thinking and feeling are interdependent (Izard, 1977) and that affective and interpersonal problems are often the result of distorted or maladaptive perceptions of our own. The implication, therefore, is that by modifying the cognitive components, the affective and interpersonal problems can be alleviated. This is a view which has empirical support (Beck, 1976; Foreyt and Rathjen, 1978; Murray and Jacobson, 1978).

The cognitive change approach can be described briefly:

(1) It is concerned with conscious rather than unconscious patterns of thinking in relation to various situational and affective (mood, anxiety, anger, etc.) problems.
(2) It addresses the maladaptive pattern of thinking of the individual members (faulty beliefs, false assumptions, misinterpretations of others' intentions or attitudes, etc.).
(3) The aim is to help the family members to recognize that their problems are a consequence of maladaptive ways of perceiving and responding to their family environment (if indeed the assessment reveals this to be so).
(4) It involves a form of systematic dialogue which includes the use of logical reasoning, verbal persuasion and rational arguments as a way of enabling the family members to achieve a more constructive appraisal of their perceptions, feelings and behaviours with the view to using alternative and more adaptive ways of behaving.

In the process of using this technique, the therapist endeavours to explore systematically those patterns of thinking which have been identified as maladaptive and/or having adverse consequences on the family functioning. Such exploration should be carried out within the framework of the McMaster model of assessment described above. In other words, the therapist tries to determine which maladaptive pattern of thinking is associated with which particular area of dysfunction. Furthermore, he encourages the family to examine those cognitive processes which have relevance for the identified problem(s) by helping the family to focus both on the content of the distorted perception and on its consequences for the family interrelationships.

Helping the family to identify, challenge and clarify their maladaptive patterns of thinking and the effect it has on their behaviours is usually a means to an end rather than an end in itself. Indeed, when the emphasis of treatment is a cognitive change approach it is important to remember that although the thought processes have a significant mediating rôle, they do not operate in isolation. On the contrary, they are part of a complex reciprocal process of interaction between cognitive, behaviour and environmental factors (Bandura, 1977, 1983). Therefore, as Wilson and O'Leary (1980) point out, it is important to explicitly build into the treatment programme the interactive effects of the cognitive and environmental factors, otherwise, 'the client will usually be left buried in introspective analysis of his/her thought patterns without engaging in the necessary corrective behaviours' (p.263). In terms of the family system, the members are encouraged to recognize the effects of distorted perceptions, which may be present within themselves or others in the family, and to reinforce the adoption and maintenance of more rational thinking patterns alongside appropriate changes in behaviour.

The family was encouraged to explore the possible issues surrounding the daughter's behaviour. Initially, most of the blame was placed on the girl ('It's all her fault'). Subsequently, the parents began blaming each other and finally blamed themselves, 'We are not very good parents because we'd failed our daughter and made her the way she is' (maladaptive thinking). However, throughout, the therapist discouraged the attribution of blame and instead encouraged the family members to examine how their attitudes were affecting their interactions. Furthermore, he facilitated a more adaptive and positive perception of others in the family and themselves. Eventually, there was a shift embracing the following theme: the child's difficult behaviour did not mean that they had made her that way. A more likely explanation was that they had not appreciated her developmental needs for greater expression of independence or her need to be trusted. Such cognitive change strategy was complemented by certain reinforcement techniques briefly described below.

Operant conditioning

This approach emphasizes the importance of the relationship between an individual's behaviour and the events which follow the behaviour. The implication of this is that behaviour by a family member is likely to prompt a reaction from the family, which in turn is likely to determine the patterns of interaction in the future. According to this principle, behaviour which is followed by a rewarding or pleasant experience is likely to be strengthened under similar circumstances on subsequent occasions. By the same token, behaviour which is followed by a painful or unpleasant experience is likely to be weakened. This is derived from the operant conditioning theory of Skinner (1953), from which a number of therapeutic techniques have been developed (Kazdin, 1978).

A widely used and effective conditioning procedure is positive reinforcement. This is a systematic way of encouraging an individual to increase or strengthen desirable behaviours and thereby to promote better adjustment. It involves the presentation of a reward (reinforcer) following appropriate behaviour. The rôle of positive reinforcement in family relationships has been studied by various researchers, and the general consensus is that it has important applications for therapy in that it focuses on those contingencies which are likely to promote pro-social behaviours between family members (Alexander and Barton, 1976; Alexander and Parsons, 1973; Stuart, 1976). Thus, in the example cited above the other members of the family were encouraged to ignore the daughter's aggressive behaviours and at the same time to reinforce (reward) with attention, praise and approval the desirable behaviours. In addition, as there was a problem of poor affective communication between husband and wife, the therapist encouraged them to adopt the use of more positive attitudes towards each other through reinforcers such as affectionate gestures and thoughtful comments.

The use of a positive reinforcement programme has to be based on a proper family assessment and behaviour analysis, both of which have been described above. Furthermore, if this technique is to have a chance of being effective, the therapist has to address a number of important considerations. These include the following:

(1) Reinforcers (rewards) at the individual or family level have to be given systematically and sensibly; that is, in accordance with the rules which have been agreed upon. The choice of reinforcers and the manner of their presentation within the family will be established by agreement with the family. Factors determining the choice of reinforcers will depend on the age, maturity and status of the family member and the circumstances under which the desirable behaviour is expected to occur.

(2) It is necessary to be clear about the individual's or family's behaviour which is to be the target for change. In the initial stages it is important to focus on target behaviours which have the greatest chance of succeeding.

(3) It is necessary to establish what type of reinforcers (rewards) are likely to be the most appropriate for use by the particular family. These may include a variety of reinforcers such as material rewards and token rewards (for example, stars in the case of children which are accumulated over a period of time and exchanged for a more substantial form of rewards such as toys, comic books, etc.); social reinforcers (for example, praise, approval, hugs, etc.) and anticipatory rewards (for example, access to watching a favourite television programme, special outings, etc.).

Modelling

Psychological modelling is a therapeutic technique based on the social learning theory of Bandura and his colleagues (Bandura, 1977; Rosenthal and Bandura, 1978). At its simplest, it might be described as 'imitative learning'. Modelling refers to the process by which a particular individual, the so-called model, acts as a stimulus for the thoughts, feelings, attitudes and/or behaviour of another individual, the so-called observer. It involves exposure and/or presentation of certain stimuli in a particular way, thereby facilitating the learning of new or novel responses. This process is known as the 'observational learning effect' and provides an important potential for behaviour change (Rosenthal and Bandura, 1978). Empirical studies have shown that it can be applied in a wide variety of clinical settings and that it is an effective means of behavioural change (Adams and Beyer, 1977; Bandura, Blanchard and Ritter, 1969; Melamed and Siegel, 1975; Nemetz *et al.*, 1978; Patterson and Brodsky, 1966).

In the family therapy setting, the therapist might choose to utilize this technique in a 'spontaneous' or 'contrived' manner depending on the change that is intended. An example of 'spontaneous' modelling would entail the therapist highlighting a positive or desired response by a

member of the family in order that one or more of the family members might adopt a similar response. For instance, in an example of a family different to the one given above, it emerged that a boy, the middle of three children, was being treated as a 'scapegoat' by the rest of the family. This was strongly denied by the family until the older girl made a spontaneous gesture of warmth by placing her hand on her brother's shoulder. This was immediately highlighted by the therapist, whereupon the father showed a similar gesture of concern towards his son. This modelling effect between the daughter and father allowed the family to adopt a more supportive and positive attitude towards the boy.

An example of a 'contrived' approach is where the therapist might decide to demonstrate systematically the use of a particular form of behaviour for the family. For instance, in a family where the style of communication tends to be brusque and provocative, the therapist might model a positive and empathic type of statement as an alternative to their aggressive and demanding stance. Having modelled it, the family members are encouraged to adopt a similar form of behaviour.

In the family therapy context, the modelling approach has to take into account the different sexes and ages of the members. Furthermore, it is important the therapist try to (1) be clear as to which aspects of the modelled behaviour are to be used as the basis for observational learning by member(s) of the family, (2) use a simple, appropriate style of demonstrating the required responses, (3) encourage the family members to attend to and to learn the essential elements of the information/behaviour which is being conveyed by the model, (4) reinforce positively the successful enactment of the modelled behaviour.

Termination and follow-up

The number of sessions for a given family will depend on the nature of the problems, the aims and goals of the treatment and the progress achieved. It is likely that a minimum of six weekly sessions following the completion of the assessment will be required to achieve a satisfactory outcome. Before, and in anticipation of, termination the therapist should be preparing the family for discharge with the aim of encouraging them to sustain the use of the techniques which proved helpful during the therapy.

It is desirable that the therapist undertake follow-up in order to monitor the intermediate and long-term outcome.

Summary

Our model of a behavioural and systems approach to family therapy views the family as a system in which the members reciprocally interact in terms of their feelings, cognitions and behaviours. These are considered to have crucial implications for the origin and maintenance of the family dysfunction. The aim of intervention is to produce change in the family by addressing the important cognitive, affective and behavioural issues. Although cognitive restructuring, social modelling and operant conditioning constitute separate techniques based on different concepts, they can nevertheless be used in parallel or in combination as part of a treatment package, but always within the framework of the family system. We consider our approach to be an advance on the ideas described by Douglas (1979);

> . . . behaviour therapists . . . need an expansion of their ideas about the system operating within families as well as outside it, and at present there is no analysis of it. Ideas are being borrowed from family therapy but perhaps the cooperation and dissemination of information between these two fields would produce a stronger and more viable form of family therapy (p. 379).

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