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ABSTRACT

The use of home-based treatment programs has become increasingly popular over the last few years. Such a program is offered by the Youth Services Bureau of Ottawa-Carleton through its Detached Worker Program. This program uses paraprofessionals who employ an eclectic combination of behavioral, client-centered, family and reality therapies. Two distinct studies were conducted to evaluate the effectiveness of the Detached Worker Program. The first one evaluated overall effectiveness of the intervention. Subjects included clients in treatment (N=18) and clients on the waiting list (N=42). Results demonstrated overall effectiveness by a lower number of police contacts and other counseling contacts for those in treatment. Questions arose about the factors that contribute to effectiveness. The second study evaluated these factors using client and worker variables as predictors in a multiple regression analysis. Subjects (N=126) were clients from a 2-year period with an average treatment length of 8.7 months. Treatment length was found to be the most important variable, followed by treatment model, and who provided supervision. Results imply that home-based programs can be readily evaluated and that treatment should be intensive and long-term to get maximum effect. (ABL)

EFFECTIVE TREATMENT IN HOME-BASED SERVICES

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The use of home-based treatment programs has become increasingly popular over the last few years (Jason, 1982). Such a program is offered by the Youth Services Bureau of Ottawa-Carleton through its Detached Worker Program. This program uses para-professionals who employ an eclectic combination of behavioural, client-centered, family and reality therapies. There are a number of advantages present in this form of intervention. Changes that occur are meaningful and immediately relevant, undermotivated clients can be reached, a greater variety of interventions are available, and it is financially efficient. Most importantly this approach capitalizes on the energy, motivation and good basic counselling skills of the worker. Disadvantages include higher costs for travel and the need for increased clinical supervision and support.

While in theory, such programs seem to be attractive alternatives to the traditional counselling options, they may be impractical, ineffective novelties. Being able to measure the real effect of these or any interventions has long been a contentious issue. The demonstration of efficacy is important not only to the life or death funding of any program but is essential to the cycle of program development. Uncovering which programs work and what aspects are most effective and demonstrating this concretely allows program development that is based on sound evidence as well as good judgment.

The difficulties of doing moderately competent program evaluation are tremendous. Pitfalls exist in design implementation, collection and analysis through to the use made of the final report (Darou & Simboli, 1986). Following a brief description of the treatment offered, two separate evaluative studies of the treatment are presented.

The Detached Worker Program (DWP) is part of a large multi-service youth bureau which also offers employment counselling, residential services, drop-in counselling and inner-city streetwork. DWP has offered group and individual interventions for 25 years and it is the individual intervention which will be the focus for this article. Approximately 20 full-time and 30 part-time staff deal with 200 to 250 children and their families annually. Staff are university or college graduates with some experience who are provided with comprehensive training. Caseloads are low (5 to 8 cases), contact is intensive (2 to 4 times weekly and 1 to 3 hours per session) and involvement is long term (9 month average, range 3 months to 3 years). The intensity, duration and treatment approach are all matched to the client's needs. Staff draw from the basics of behaviorism, client centered, family and reality therapies.

Clientele are families of children and adolescents ranging in age from 6 to 18 years old who demonstrate behavioural or emotional problems. Referrals to the service come from a variety of sources including schools, police, Children's Aid Society, neighbors and the clients themselves. New referrals are placed on a waiting list until a worker becomes available usually for a period of 3 months.

Typically, the course of involvement begins with an assessment period which relies heavily on a family systems orientation. This allows the creation of a treatment plan which usually incorporates the client's input. The plan normally employs crisis and behaviour management as a preliminary to dealing with underlying issues. Treatment may last from 1 month to several years and plans may undergo several revisions. Decisions to end treatment are based on the worker and supervisor's judgement that treatment was either successful, has plateaued or is not productive. The termination phase deals with attachment/separation issues, trouble shooting and support-networking. The duration of this phase depends on the degree of attachment but is usually 10 visits long, and involves a weaning-off process. Post-treatment support is provided through an aftercare component which maintains phone contact in most cases for a two year period.

The evaluation regimen was introduced into the program in 1984 after extensive discussions with staff. Two standardized parent rating measures (The Child and Adolescent Adjustment Profile (Ellsworth, 1981) and the Conners Behaviour Checklist (Conners, 1969)), one teacher-rating scale (Conners Behaviour Checklist for teachers (Conners, 1969)) and a series of counts and measures such as police contacts are collected in the first and last weeks of involvement for all cases. It is these measures that form the basis for ongoing program evaluation.

The Studies

Two distinct studies were conducted to evaluate the effectiveness of the Detached Worker Program. The first one ran from May 1985 to November 1985 and evaluated overall effectiveness of the intervention. This was a quasi-experimental effort comparing clients in treatment with a waiting list control group over the initial three months of treatment using several measures. Of the many questions that arise form the results of this study, the one of the most importance to the organization concerns the factors that contribute to effectiveness. These factors were evaluated in the second study to be reported. This study was based on all cases closed over a two year period. It used client and worker variables as predictors in a multiple regression equation.

Study 1

Method

Subjects were 60 clients of the Detached Worker Program. Eighteen entered treatment at the beginning of the study while 42 were on a waiting list for treatment. The mean age was 11.9 years (SD 2.2, range 6.6-15.2), 70% were boys, 33% of the families were self supporting and 40% were single parent families.

Measures used were the Conners Behaviour Checklist for parents and the Child and Adolescent Adjustment Profile (CAAP) administered before and after the 3 month period of the study. Additionally, a questionnaire was created to collect information on police contacts, counselling services and medical services. This too was completed by the parents before and after the 3 month period. Other biographical information was also collected for analysis.

Results and Discussion

Examination of the CAAP and Conners instruments indicated that improvements were present in those subjects receiving treatment. These changes were evaluated by means of t-tests and found to be significant (CAAP, $t(13) = 5.58$, $p < .001$: Conners, $t(13) = 4.79$, $p < .001$). Although the waiting list subjects did not represent a true control group (assignment was not randomized, but rather on a first come first serve basis), this group does allow comparisons to be made. Changes in scores for this group were positive but significant only with the Conners $t(16) = 4.48$ $p < .001$. However, differences in posttest scores between the two groups were not significantly different, that is no significant differences were found in parents' ratings of their child's behaviour.

The extra agency referral rates before and after the study period were compared between the two groups. No differences existed at pretest, however large improvements were evident in contact rates for the subjects receiving treatment when viewing police contacts and other counselling contacts. These were tested by means of a Chi Square analysis. Police contact rates were identical at pretest (approximately 30%) for each group but no further police contacts were recorded for treatment subjects, while waiting list subjects maintained the rate of contact. This result was statistically significant $X^2(29) = 3.87$, $p < .05$. Other counselling contact rates ran at the 33% level for both groups at pretest. Posttest rates showed that waiting list subjects maintained the pretest rate of contact while treatment subjects reported no other counselling contacts. This result was also significant $X^2(29) = 7.40$, $p < .01$.

The results indicate that while no real difference is evident on the parent rating measures between treatment and waiting list subjects, there is a difference in police contacts and other counselling contacts that strongly favour treatment subjects. The drop in these contracts is a powerful, meaningful endorsement of the effectiveness of the treatment. The absence of significant differences on the rating measures requires some explication. Possibly there is a confounding of the validity of those instruments as a result of the involvement of the parents in the treatment. As well, the presence of other counselling contacts for a full third of waiting list subjects would serve to improve the situation as evidenced by the rating measures. This rationale further serves to outline the process of spontaneous recovery and a regression to mean effect often found in so-called untreated subjects.

The clear result of this study is extremely positive and supports the efficacy of the intervention. This enthusiastic support must be somewhat tempered by the fact that a true experimental design was clearly not employed. However, given that the design used is a typical approximation to the ideal design and that the limitations are founded in conscientious, ethical considerations, the result is probably as dependable as can be had.

Study 2

Having established evidence of overall program effectiveness, questions then arise about which factors contribute to that effectiveness. The method used is known as multiple regressions analysis. It is clear that many variables contribute to treatment outcome. Multiple regression determines which variables contribute significantly to the outcome, and the variables are

sorted out in order of significance. This produces an overall measure (R^2) of the total variance explained by the variables used. It also tells which are significant (and often as important, which are insignificant), and it tells the relative importance of the variables.

In the present study, the dependent variable (i.e. the outcome measure) was the change score on the Conner's Behaviour Checklist. The independent variables (i.e. the contributing factors) were chosen by examining several review articles such as Andrews (1983) and Bergin (1973). The chosen variables were in four categories: (i) treatment variables; treatment length, time on waiting list and treatment type (group, one-to-one or part time), (ii) worker variables; education, sex, age and model used (client-centered, family systems, behavioural, or eclectic), (iii) subject variables; age (subjects' sex had been investigated in an earlier study and removed, while age was found significant) and (iv) the worker's supervisor. The variables were chosen to test several beliefs. First, it was felt that good counsellors were a great predictor of outcome. For ethical reasons, individual counsellors were not compared. Instead, a list of counsellor variables were selected (P. Faulkner, personal communication, October, 1987). The counsellor's theoretical orientation was of particular importance because this reflects the values transmitted to the client, and according to Andrews (1983), this is crucial for positive outcome to occur. The treatment variables such as length, waiting time, and type allow the agency to make logistical decisions such as reducing treatment length, changing the waiting list, or increasing the number of groups. The subject age answers a concern that the program is less effective with younger children. Finally, the supervisors are a key variable because of their direct impact on the worker (Worthington, 1987).

Method

Subjects were 126 clients with an average age of 10.5 years (SD 3.2); 74% were male. They represented all the clients worked with over a two year period, who had both pretests and posttests, and all the information required to determine the independent variables. Average treatment length was 8.7 months (SD 5.4). Average waiting period was 3.8 months (SD 5.2).

Analysis used was stepwise multiple regression with pretests used as a covariate to control for regression on the mean. In the first run, all variables were put in individually. Significant variables to come out were treatment length, two treatment models, with one supervisor at borderline significance. In the second run, treatment model and supervisor were both entered as blocks. Categorical variables were handled by the method of Kerlinger and Pedhazer (1973).

Results and Discussion

The results can be seen in Table 1. The covariate entered with very high levels of significance indicating that the data does in fact contain a strong regression to the mean (this means simply that clients that come in with the worst pre-scores will make the greatest improvements). The most important of the dependent variables was treatment length. At this point, 22 percent of the variance was accounted for. The next variable entered was the model of treatment. Client-centered therapy and family therapy were the only two that were found to be effective (as indicated by positive Betas). The next variable to

go in was the supervisor. Two supervisors scored as effective, it should be noted that these two supervisors were the only ones with Master's degrees. The supervisor score is confounded by several factors. The supervisor with the worst results may have had problematic employees, and thus he would have kept the treatment length of his clients high and given them easier cases. In addition, the sample size is small and uneven. However, the result supported Worthington's (1987) finding that supervisors with at least a Master's degree outperform supervisors with a B.A. or less. The results concerning the model of treatment are relevant to the agency's internal politics. In fact the results indicated that the supposed family-centered department used client-centered methods as often as family systems, and the effectiveness of the two approaches were about equal. These results are also confounded somewhat. The counsellors that described themselves as using these to models probably did so in part because they had longer experience and additional training in these approaches. Thus the results likely do not indicate that using the two models causes better treatment outcome. Instead, they suggest that the more experienced and better trained staff probably identify more strongly with a model.

The result that longer treatment length led to greater client improvement was not surprising. However, in the agency at this time, there was a move to cut the treatment length in half to improve treatment efficiency. These results tempered that policy somewhat.

TABLE 1

Regression Analysis for Predicting Client Improvement

Predictor variable	Simple r	R^2	Beta	F-Value	P
Covariate (pretest scores)	.471	.222	.471	35.3	.0000
Treatment length	.276	.263	.438	22.0	.01
Model	.211	.332	.204	15.1	.01
Supervision	.081	.394	-.377	13.4	.01

General Discussion

The overall results suggest several ingredients of effective treatment. First, the basic principle of using home-based treatment with B.A. or college-trained staff is clearly valid. This is true in terms of psychological variables, but it is especially true in regards to delinquent behaviors. This fact just adds to the body of research that is overcoming the "nothing words" myth of 1970's (Gendreau & Ross, 1987). The next ingredient for effective services is a therapeutic program that is based on proven principles, grounded in experience and research, and is demonstrably successful. This latter point needs to be emphasized. If a program cannot or will not demonstrate its worth in objective ways, beyond anecdotal evidence and testimonials, it should not be funded, and the precious human and financial resources should be moved to areas where they will do real good.

The third ingredient is a substantial treatment. Gendreau and Ross (1987) found that delinquency prevention programs with less than 50 client

contacts were generally not effective. The fourth basic ingredient is human resources. This includes skilled, trained, enthusiastic, warm, sensitive counsellors and supervisors. The regression analysis demonstrated that a key to client success was good staff and a healthy interaction between counsellor and supervisor. Ironically, social services are far behind industry in managing this resource.

In designing a new program, a practical, demonstrated treatment model should be developed first. But the second thing to do is instate a system of evaluation. This will avoid innumerable problems (Darou & Simboli, 1986). In a period of months, it will be accepted as an established fact, and the staff will see collecting data as normal as filling out their expense accounts. The evaluation should allow the program to compare its activities to generally accepted standards, and it should have a solid outcome-research component. Measures should have acceptable psychometric qualities on one hand, but not be offensive to the staff or clients.

A variety of measures should be used, tapping different sources of information about the client. Regression effects must be controlled (i.e. there must be a control group). The format of the final outcome of the evaluation should be easily visualized before the evaluation is even begun.

Several implications thus follow from the research presented here. Home-based programs can be, contrary to some opinions, readily evaluated, even when they clearly identify themselves as alternative culture based. Also, the results suggest treatment should be intensive and long-term to get maximum effect. Gendreau and Ross, (1987) suggest 50 sessions. There should be high quality supervision and plenty of it. This is particularly true because the staff in home-based services are detached from many of the usual social and technical supports that clinic-based services use. Supervision should be weekly and supervisors should have at least a Master's degree with practicum. Finally the staff should be carefully selected, based on objective program goals, using the most recent personnel selection methods (e.g. Barnabé, 1982). On-going staff development is crucial, and including staff time as well as other expenses, should account for 10% of a program budget. It is not unreasonable to recycle 10% of an agency's funds back into its most important resource (Blanchard & Johnson, 1981).

The conclusion should not be surprising to anyone that is attracted by home-based counselling services using paraprofessionals. The results clearly show that the programs can work, can be evaluated, need a carefully designed treatment approach, and to a large extent depend on the competence of the staff employed there. The results thus give resounding approval of home-based services and suggest several ways to optimize them.

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EPILOGUE

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We consider the strengthening of our liaison with colleagues in Ontario and other Provinces as a medium for our development as professionals. Our involvement in National Conferences and support of National Conferences and support of National Publications provides valuable vehicles to examine issues of significance to all. By examining issues there is constant renewal of knowledge of the counselling function.

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