

*CONTINGENCY CONTRACTING WITH DELINQUENTS:
EFFECTS OF A BRIEF TRAINING MANUAL ON STAFF
CONTRACT NEGOTIATION AND WRITING SKILLS*

STEVEN J. WELCH AND STEPHEN W. HOLBORN

UNIVERSITY OF MANITOBA

A brief training manual was developed for the purpose of teaching child-care workers to contingency contract with delinquent youths living in residential care facilities. The manual was designed to require minimal supplementary training by a professional. In Experiment 1 a multiple baseline design was used to assess the effect of the manual on 4 child-care workers' contract negotiation and writing behaviors. Experiment 2 consisted of four A-B systematic replications. Behaviors were assessed within the context of analogue training simulations and generalization tests with delinquent youths. Results from the analogue simulations indicated that the manual was successful in increasing both types of behaviors to a level of proficiency that equaled or surpassed that of behaviorally trained graduate students, and results from the generalization tests indicated that the child-care workers were able to apply their newly acquired contracting skills with delinquent youths. Procedural reliability varied across child-care workers, but was usually high.

DESCRIPTORS: delinquents, child-care workers, contingency contracting, contract training manual, standardization, procedural reliability

A contingency contract is a written and signed agreement between two parties that specifies behavioral requirements and the consequences for their fulfillment (e.g., DeRisi & Butz, 1975). Contracting has been used as a treatment strategy for a number of clinical problems such as communication in distressed couples (e.g., Stuart, 1980), management of psychiatric patients (e.g., Bergman, 1975), weight control (e.g., Mann, 1972), smoking (e.g., Winett, 1973), drinking (e.g., Gotestam & Bates, 1979), drug abuse (e.g., Boudin, 1972), and school-related behavior problems (e.g., Homme, 1971).

In addition, contracting has been used extensively in the treatment of adolescents deemed "delinquent" or "incorrigible." Numerous uncon-

trolled case studies suggest that contracting is an effective way of managing the various behavior problems typical of such youths (e.g., Blechman, Olson, Schornagel, Halsdorf, & Turner, 1976). More importantly, a considerable amount of controlled research demonstrates the effectiveness of contracting in modifying the problem behaviors of adolescents compared to more traditional therapies, attention placebo controls, and no treatment controls (e.g., Alexander & Parsons, 1973; Walter & Gilmore, 1973). However, two less supportive findings also exist. Jesness (1976) found contracting and transactional analysis to be equally effective, and Weathers and Liberman (1975) obtained many dropouts and minimal behavior change.

This variability in outcome may be related to unquantified variation in the contingency contracting procedure. In general, research on contracting cannot be called technological in the sense that the term is used by Baer, Wolf, and Risley (1968). That is, investigators have not described their contracting procedures with sufficient precision to allow direct replication by other researchers. Although some articles provide guidelines for the contents of the contract and stress that contracts should be negotiated, they provide no operationalized procedure for the negotiation process. Consequently,

Preparation of this article was supported in part by a grant from the Manitoba Mental Health Research Foundation to S. J. Welch and S. W. Holborn.

This research is based on a thesis submitted to the Faculty of Graduate Studies of the University of Manitoba by S. J. Welch in partial fulfillment of the requirements for the Doctor of Philosophy degree, under the supervision of S. W. Holborn. We are grateful to Marvin Brodsky, Don Fuchs, and Derek Jehu for their help as committee members, and to Richard B. Stuart for his advice as external examiner.

Requests for reprints should be sent to the second author at the Department of Psychology, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada.

it is likely that the contracting procedures reported in the literature differ from one another to an unknown degree. Although there is some evidence to suggest that contract content per se may not be highly related to outcome (Stuart & Lott, 1972), this is not the case with the negotiation aspect of contracting, which is thought to be important to successful outcome (e.g., Blechman, 1974; DeRisi & Butz, 1975).

This problem is further complicated by the fact that individual therapists may have deviated from protocol to an unknown degree. The independent variable (contingency contracting) may not have been presented to the youths in the manner in which it was described (albeit nontechnologically). Indeed, Stuart and Lott (1972) found that their therapists were somewhat idiosyncratic in the manner in which they used contracting, and for this reason Stuart and his colleagues (Jayaratne, Stuart, & Tripodi, 1974) recommended that investigators adopt standardized contracting procedures. However, even if standardized procedures were adopted, there would be no way of knowing the extent to which therapists conformed to these procedures unless procedural (i.e., independent variable) reliability checks were conducted. Several recent articles emphasize the necessity for procedural reliability checks to ensure the integrity of the independent variable (e.g., Billingsley, White, & Munson, 1980; Peterson, Homer, & Wonderlich, 1982). Thus, it is apparent that the creation of a standardized contingency contracting procedure that could be subjected to reliability tests when applied would facilitate the interpretation of future research results.

Although reasonably technological descriptions of standardized procedures designed to teach youths and their parents to negotiate and write contracts exist (e.g., Blechman, 1974), none exist for training child-care staff to use contracting with delinquents living in residential care settings even though the procedure is well suited to and often used in such settings (e.g., Allison, Kendall, & Sloane, 1979). For this reason, a procedure for training child-care staff to use contracting with delinquent youths was developed and then assessed. The procedure has a number of desirable features. It has a standardized

format in which specific staff negotiation behaviors are written on a flowchart kept by staff members, and behaviors involved in contract writing are cued by written headings on a fill-in-the-blanks style standard contract form. This standardization should facilitate both adherence to protocol and assessment of procedural reliability. It also eliminates the need for memorization of the procedure, which should increase acceptability to staff. After the contract has been negotiated and written, staff members complete a checklist of the behaviors involved in contract negotiation and writing. If a behavior has been omitted, the checklist prompts the staff member to perform the behavior before ending the session. Thus the procedure contains a self-monitoring and self-correction component. The entire procedure is presented to staff as a brief manual that can be read quickly and that requires minimal supplemental input from a professional. Because staff members keep the manual, they may refer to it at any time and may use examples provided in the manual as models for their own contracts. Finally, the procedure was designed so that a child-care staff member learns to perform certain negotiation behaviors that in turn serve to prompt the youth to do the same. The youth is not subjected to a period of formal (and perhaps tedious) training before beginning an actual contracting session; he or she can contract with a staff member as soon as the staff member has read the manual.

EXPERIMENT 1: MANUAL PLUS MINIMAL FEEDBACK

METHOD

Subjects and Setting

Subjects were 4 staff members of a residential treatment facility for emotionally and behaviorally disturbed boys and girls, 11 to 15 years of age, who were placed as a result of "status offenses" (e.g., truancy, violation of alcoholic beverage control regulations) or felonies. All subjects were employed as child-care workers (CCWs). They ranged in age from 26 to 35 years, in education from grade 12 to bachelor's degree, and in experience as CCWs

from less than 1 year to 9 years. The 4 CCWs negotiated contingency contracts with 9 youths who lived in the residence.

Description of the Manual

The manual was designed to be directly relevant to child-care staff who work with delinquent youths in residential care facilities. It was nine double-spaced typewritten pages in length, excluding figures and two sample contracts. All relevant steps in the negotiation process were contained on a flowchart to which the CCW referred during negotiation, and the text provided a rationale for the negotiation steps together with a small amount of supplementary information. The flowchart is shown in Figure 1. Most steps were derived from recommendations made by other researchers.

The remaining pages described how to produce a written contract by filling in the blanks of a standard contract provided in the manual. Headings on the standard contract prompt the CCW to fill in (a) the names of the youth and CCW, (b) the desired behavior, (c) the reward, (d) a bonus for performance beyond that required to earn the reward, (e) the penalty, (f) special conditions that would necessitate a postponement of the presentation of the reward such as being confined to the cottage for some independent misbehavior, (g) the monitoring system to be used, (h) when the contract begins and when it is to be renegotiated, and (i) the signatures of the youth and CCW. These headings were derived from recommendations made by other investigators with the exception of the "special conditions" heading which was suggested by the CCWs. A copy of the manual may be obtained from the authors.

Procedure for the Assessment of Contracting Skills

Assessments of each CCW's contracting skills were conducted in a seminar room that contained a table, chairs, and video equipment. Each CCW's contracting skills were assessed during a series of simulations. During each simulation the CCW sat at a table opposite the experimenter and was presented with one of the six typewritten problem

descriptions shown in the Appendix. Each described the behavior problem of a fictitious youth, indicated that the CCW was to assume he or she had already talked to the youth about the problem once before, and provided baseline data regarding the frequency of the problem behavior. None of the six problem descriptions corresponded to either of the two sample contracts contained in the manual. The paper containing the problem description also contained a list of three instructions (described below). Additionally, several pieces of lined paper and a pencil were placed on the table and the CCW was told, "This is for you in case you want to jot anything down." The CCW was allowed approximately 5 min to read and think about the problem description while the experimenter focused the video camera. Each CCW participated in one or two simulations per session, one session per working day. Some simulations functioned as pretests of a CCW's contracting skills whereas others followed training and thus functioned as posttests.

Pretest 1. Two different kinds of pretests were conducted. In Pretest 1 the instructions that followed each problem description were: (a) Pretend that (*experimenter's name*) is this youth; (b) deal with this problem as you see fit (i.e., as you would if this problem were really happening in your cottage); (c) try to limit the interaction to a maximum of 20 min. If at any time during the simulation the CCW used the term "reward" or "penalty" or an analogous term, he or she was immediately given a list of rewards and penalties (described below) and was asked to use only items on the list. The "youth" (i.e., experimenter) responded to the CCW's verbalization in a standard manner, described later.

Pretest 2. In Pretest 2 the instructions that followed each problem description were: (a) Pretend that (*experimenter's name*) is this youth; (b) use contingency contracting to deal with this problem and assume that only the rewards and penalties listed on the next page are at your disposal; (c) try to limit the interaction to a maximum of 20 min. A list of seven rewards and five penalties affordable and acceptable to residence supervisors was provided. The "youth" (i.e., experimenter) responded

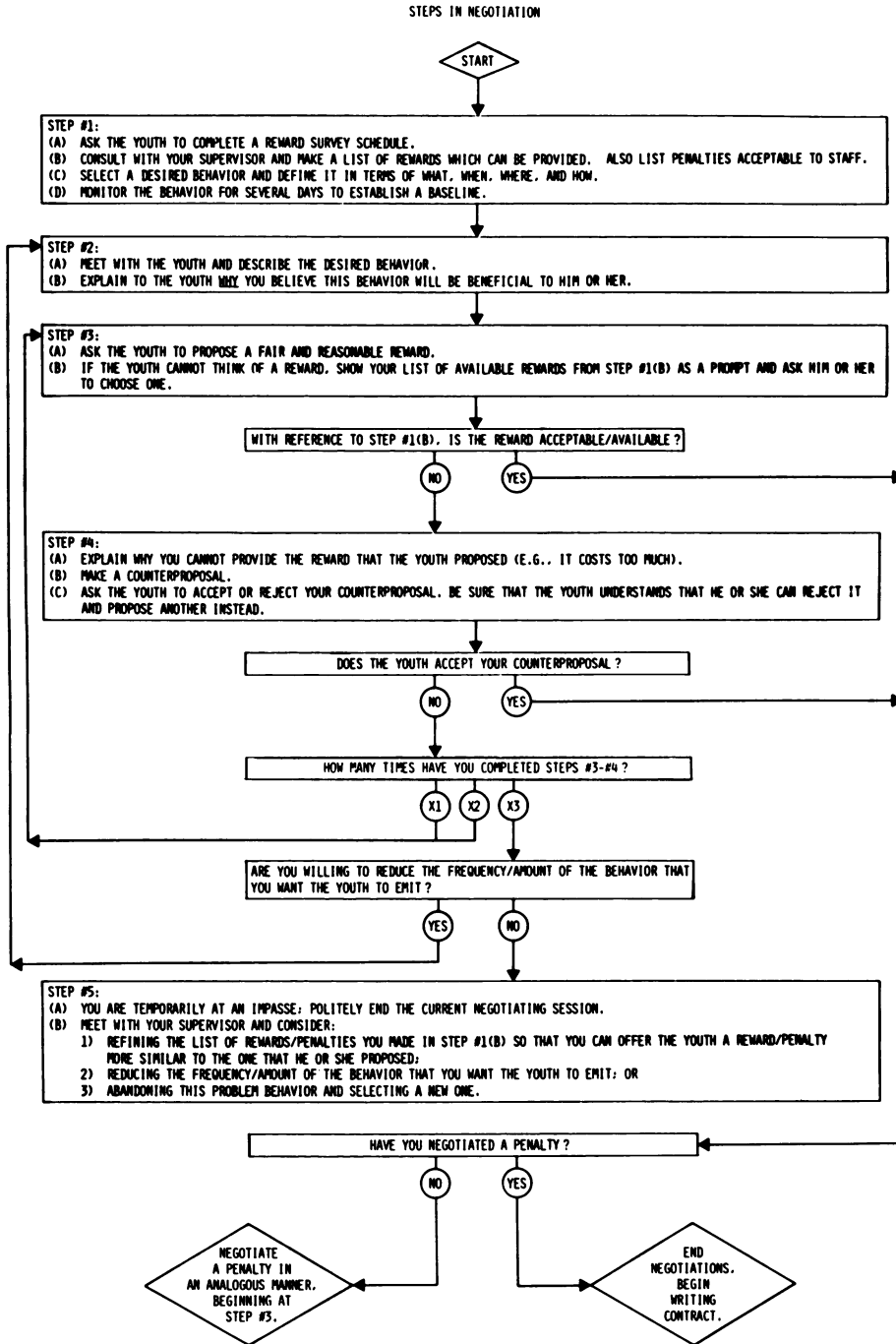


Figure 1. The flowchart of required negotiation behaviors.

to the CCW's verbalization in a standard manner, described later.

Pretest 2 was conducted to help determine whether the low frequency of contracting behaviors emitted during Pretest 1 was due to a true deficit

in contracting skills or to a problem with stimulus control; the CCW's may have possessed contracting skills but may have been disinclined to use them when asked to deal with the youth's problem behavior "as you see fit."

Training. Following the pretest simulations each CCW was presented with a copy of the training manual to read. Before the posttest simulations, CCWs were asked if they had read the manual or referred to other sources of information about contracting. All responded "yes" to the former and "no" to the latter question. Following each posttest simulation the CCWs sometimes asked for feedback regarding the adequacy of their performance. At these times the experimenter provided a minimal amount of feedback (e.g., "That was good but you forgot to negotiate a penalty."). Although feedback was never more than two or three sentences, it may have had some effect on the CCW's behavior beyond that induced by the manual.

Posttest. During the posttest the instructions that followed each problem description were the same as those presented during Pretest 2, and the same list of seven rewards and five penalties accompanied each problem description. The CCWs used the flowchart of required negotiation behaviors and the blank standard contract form during each simulation, and they were allowed to refer to other sections of the manual, including the sample contracts, if they wished.

Standard "youth" responses. During pretest and posttest simulations the "youth" (i.e., the experimenter) responded to the CCWs' verbalizations in the following manner: If the CCW proposed a reward without asking the youth to propose one first, the youth accepted it. If the CCW asked the youth to propose a reward, the youth proposed a reward that was clearly excessive and not on the list of available rewards presented to the CCW. If the CCW made a counterproposal, the youth accepted it. The youth responded in a similar manner with respect to the penalty. If the CCW asked questions not specifically prompted by the flowchart (as generally occurred during Pretests 1 and 2), the youth simply answered the questions or said, "I don't know."

Acquisition of comparative data. To determine whether the manual improved CCWs' contracting skills to a level comparable to those of behavioral counselors with advanced training, 6 psychology graduate students were recruited to serve as a comparison group. All 6 considered themselves be-

haviorally oriented and had read about contracting, and 2 had used contracting in work with adolescents. None had read the manual used in this research. Each student was presented with a different one of the six problem descriptions (see Appendix), and their contracting skills were assessed under Pretest 1 conditions. If a student failed to use contingency contracting under Pretest 1 conditions, he or she was asked to respond to the same problem description again, this time under Pretest 2 conditions.

Generalization tests. The pretest and posttest simulations used to assess the effect of the manual on the CCWs' contracting skills were analogue situations. Following the posttest simulations 3 of the 4 CCWs each contracted with several youths. The 4th CCW went on vacation shortly after the posttest simulations and was available to contract with only 1 youth. Contracting sessions took place in various locations within the residence, most often in the youths' bedrooms. Most sessions were audiotaped.

Scoring procedure. Negotiation and contract writing behaviors were scored separately. Negotiation behaviors were scored from video or audiotape. Scorers noted the occurrence, nonoccurrence, and in some cases, partial occurrence of required negotiation behaviors. "Required" behaviors were those that should have been emitted according to the flowchart. If a required behavior occurred, a "1" was scored. In the case of some behaviors (e.g., the description of the desired behavior), a "½" was scored if the behavior occurred but was qualitatively poor. If a required behavior did not occur, a "0" was scored. A maximum of 10 points could be earned during the negotiation phase of the simulations. The percentage occurrence of required behaviors was computed by dividing the number of points earned by 10 and multiplying by 100. It is important to note that the behaviors cued by Steps 2, 3, and 4 of the flowchart could have been emitted by CCWs (and graduate students) during the pretests even though the flowchart was unavailable during pretest simulations.

For generalization tests, the scorer determined whether a behavior was required (i.e., in consideration of the flowchart and the youth's responses)

and also whether it occurred. The percentage occurrence of required behaviors was computed by dividing the number of points earned by the number of points that should have been earned and multiplying by 100.

For written contracts, a "1" was scored for each required textual response that occurred and "0" was scored for each required response that was absent. In the case of some textual behaviors a "½" was scored if the response occurred but was qualitatively poor. "Required" textual responses were those necessary to complete the blank standard contract form. A maximum of 11 points could be earned. If no written contract was produced a score of 0 was assigned. The percentage occurrence of required behaviors was computed by dividing the number of points earned by 11 and multiplying by 100. It is important to note that all textual responses could have occurred during the pretests (paper and pen were available) even though the blank standard contract was unavailable during pretest simulations. A detailed scoring manual may be obtained from the authors.

Interscorer reliability. For CCWs, approximately one third of the tapes of pre-, post-, and generalization tests were randomly selected and scored by a second scorer. Percentage agreement was calculated separately for those behaviors that the primary scorer scored as "1," "½," or "0." Separate coefficients were calculated for negotiation behaviors and contract writing behaviors. Also, one third of the tapes of the graduate students were randomly selected and scored by a second scorer. All interscorer reliability coefficients were calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. Interscorer reliability assessments yielded a mean agreement of 99% (range, 83% to 100%).

Experimental Design

A multiple baseline design across CCWs was used. The problem descriptions used during simulations (see Appendix) were selected randomly with two restrictions. First, the initial problem description was different across CCWs. Second, within

CCWs all problem descriptions were different except for the first and the last, which were the same for comparative purposes.

RESULTS

The effect of the training manual plus minimal feedback from the experimenter on the contracting skills of the 4 CCWs is shown in Figure 2. The CCWs' negotiation behaviors occurred infrequently during Pretest 1 and writing behaviors did not occur at all. None of the CCWs attempted to contract during Pretest 1. Asking the CCWs to try contracting during Pretest 2 had little effect on Mr. A's behavior but had a noticeable effect on the other CCWs. It increased the writing behaviors of Mr. B and Mr. D without affecting their negotiation behaviors, whereas it markedly increased the negotiation behaviors of Ms. C but had little effect on her writing behaviors. Although each of the CCWs had some of either the required negotiation or writing behaviors in his or her repertoire before reading the training manual, none had a significant amount of both types of behaviors.

Posttest data indicate that the manual plus minimal feedback produced consistent increases in the percentage occurrence of both negotiation and writing behaviors in all CCWs. In the case of Mr. A, and to a lesser extent Mr. B, the manual acquired better stimulus control of writing behaviors than of negotiation behaviors. Nevertheless, in general the manual enhanced both the negotiation and writing behaviors of CCWs to such an extent that their performances were clearly improved over pretest levels. Their performances usually surpassed the median performances of the graduate students as well (negotiation median, 64%; writing median, 50%).

The extent to which each CCW's newly acquired contracting skills generalized from the analogue simulations to contracting sessions with real youths also is illustrated in Figure 2. With Youth 1, Mr. A's negotiation and writing behaviors were comparable to his performance during posttest simulations. Many of his negotiation behaviors and some of his writing behaviors were lost with Youth 2, possibly because this youth was rather hostile and

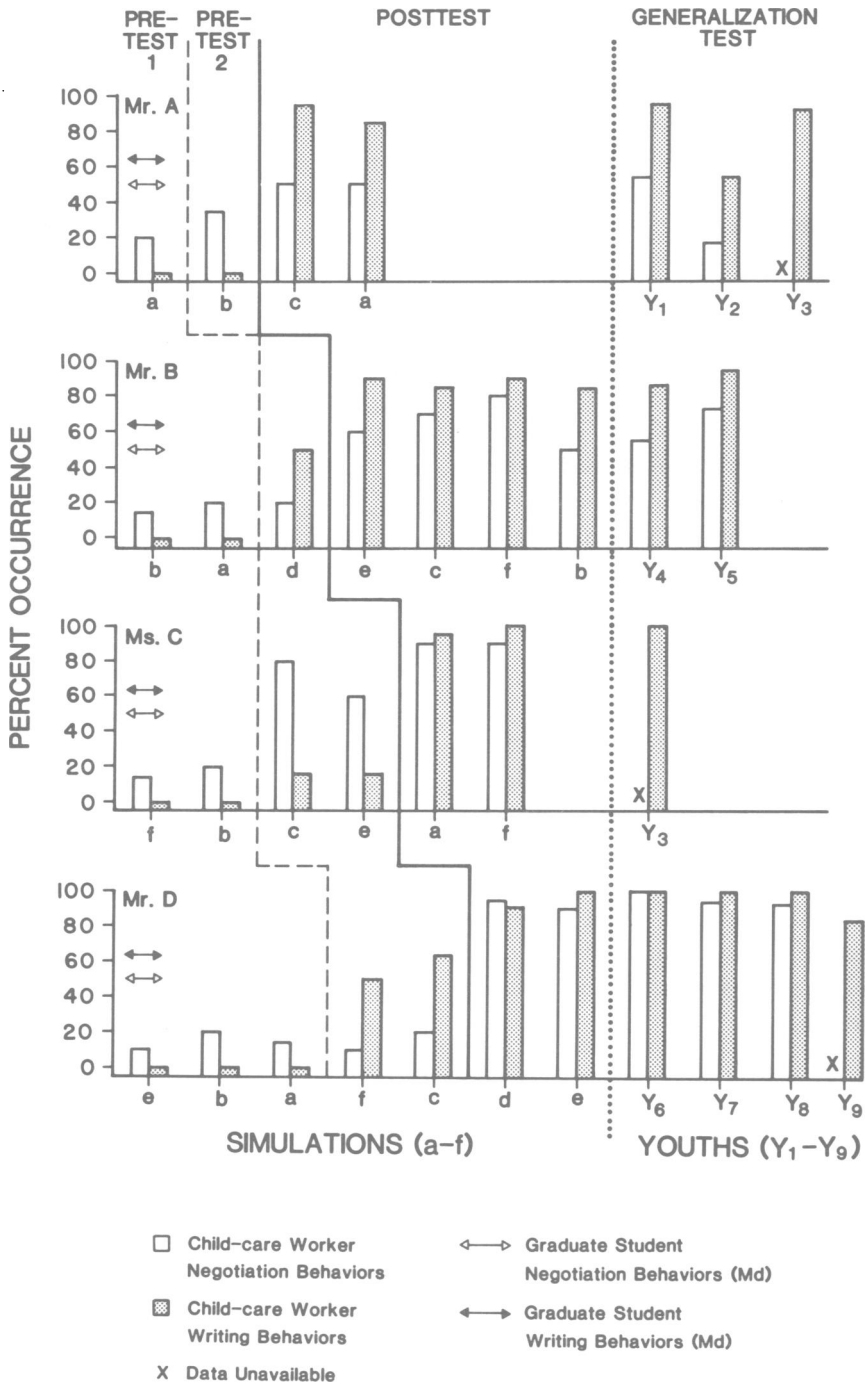


Figure 2. The percentage occurrence of required negotiation and writing behaviors produced by the 4 child-care workers who participated in Experiment 1. The letters (a-f) along the abscissa each represent the problem descriptions used in a pretest or posttest simulation (see Appendix). The subscripted letter Y along the abscissa represents a generalization test with a particular youth. The ordinate indicates the percentage occurrence of required negotiation behaviors and writing behaviors (the former depicted by open bars and the latter by solid bars). The open arrow on the left hand side of each CCW's graph indicates the median percentage occurrence of required negotiation behaviors for the 6 graduate students, and the solid arrow indicates the median for writing behaviors.

belligerent. Data on negotiation behaviors were unavailable for Youth 3 because Mr. A contracted with this youth in the experimenter's absence. The data on contract writing behaviors indicate that they returned to posttest levels with this youth. The data for Mr. B and Mr. D show good generalization of negotiation and writing behaviors, with both being comparable to their respective posttest performances. The negotiation data for Youth 9 were unavailable for the same reason as with Youth 3. Ms. C went on vacation following the posttest simulations. Upon her return she renegotiated a contract originally negotiated with Youth 3 by Mr. A. This was done in the experimenter's absence; therefore only data on contract writing behaviors were available. Ms. C's performance was excellent and comparable to her posttest performances.

EXPERIMENT 2: REVISED MANUAL ALONE

Experiment 2 involved a systematic replication of Experiment 1. It was conducted in a different residential care facility with different CCWs and youths. The purpose of Experiment 2 was to assess the effectiveness of a revised training manual without experimenter feedback and under conditions that minimized the possible confounding effect of practice during posttest simulations on generalization test performance.

METHOD

Subjects and Setting

The CCWs who participated in this phase of the research worked in a community-based group home for 8 behaviorally disturbed youths. The group home served Native Canadian girls 13 to 17 years of age with moderate behavior problems. The reasons for placement were the same as for the first residence. All subjects were employed as CCWs. They ranged in age from 23 to 37 years, in education from grade 10 to bachelor's degree, and in experience as CCWs from 2 to 10 years. The CCWs negotiated contingency contracts with 4 youths who lived in the residence.

Description of the Revised Manual

The revised manual was essentially the same as the earlier version with three exceptions. First, in an effort to increase the percentage occurrence of required negotiation and contract writing behaviors, a checklist was added to the manual with instructions to the CCW to work through the checklist just prior to signing the contract and to make any corrections necessary. Second, the number of sample contracts contained in the manual's appendix was increased from 2 to 13 in an effort to provide model contracts for the modification of many behavior problems typical of youths in residential settings. Third, several minor changes in wording were made to make the manual clearer, as per feedback received from the CCWs who participated in Experiment 1. The revised manual was 15 pages long.

Procedure for the Assessment of Contracting Skills

Simulations and generalization tests took place in an office in the group home. Video equipment was present in the office during simulations and an audio recorder was present during generalization tests.

The pretest, posttest, and generalization test scoring procedures for CCW contracting behaviors were identical to those described in Experiment 1. Approximately one quarter of the tapes made of each type of test were randomly selected for scoring by a second scorer. Reliability coefficients were calculated as in Experiment 1. Mean interscorer reliability was 99% (range, 83% to 100%).

Experimental Design

In Experiment 1, each CCW participated in several posttest simulations before participating in a generalization test. Consequently, it is possible that the relatively good performance obtained on generalization tests may have been due in part to the effect of practice with a variety of problem descriptions during the posttest simulations. To reduce the potential effect of such practice, Experiment 2 used a simple A-B replication design. The CCWs who participated in Experiment 2 received only one sim-

ulation under each of the Pretest 1, Pretest 2, and posttest conditions before the generalization test. A single problem description was used with each CCW, instead of all six. Each CCW's problem description was different and did not correspond to any of the sample contracts in the manual. No feedback was given to a CCW during the time between the single posttest and the generalization test. The CCWs were given the manual after Pretest 2 and were asked to record the number of minutes they spent reading it prior to the posttest.

RESULTS

The effect of the revised training manual upon the four CCWs is shown in Figure 3. The results essentially replicated those obtained in Experiment 1. Negotiation behaviors occurred infrequently and writing behaviors did not occur at all during Pretest 1. No CCW attempted to use contracting during Pretest 1. The Pretest 2 instructions had little effect on the behavior of the CCWs, with the exception of Ms. F whose contract writing behaviors showed a moderate increase. Ms. F was the only CCW who attempted to produce a written contract under Pretest 2 conditions. The mean number of minutes spent reading the manual prior to the posttest was 49 (range, 20 to 105).

The percentage occurrence of negotiation and contract writing behaviors increased markedly during the posttest. With Ms. H, a second posttest was conducted immediately following the first because her ability to follow the negotiation flowchart appeared to be impaired by test-related anxiety. A small prompt to "not worry" appeared to relax Ms. H, and her performance improved noticeably during the second posttest. In general, the posttest performance of all 4 CCWs equaled or surpassed the median performance of the graduate students in Experiment 1.

The data for Mr. E and Ms. F showed good generalization of negotiation and writing behavior, with both being comparable to their respective posttest simulation performances. Ms. G's negotiation behaviors decreased somewhat from posttest levels with both Youth 13 and Youth 14, probably be-

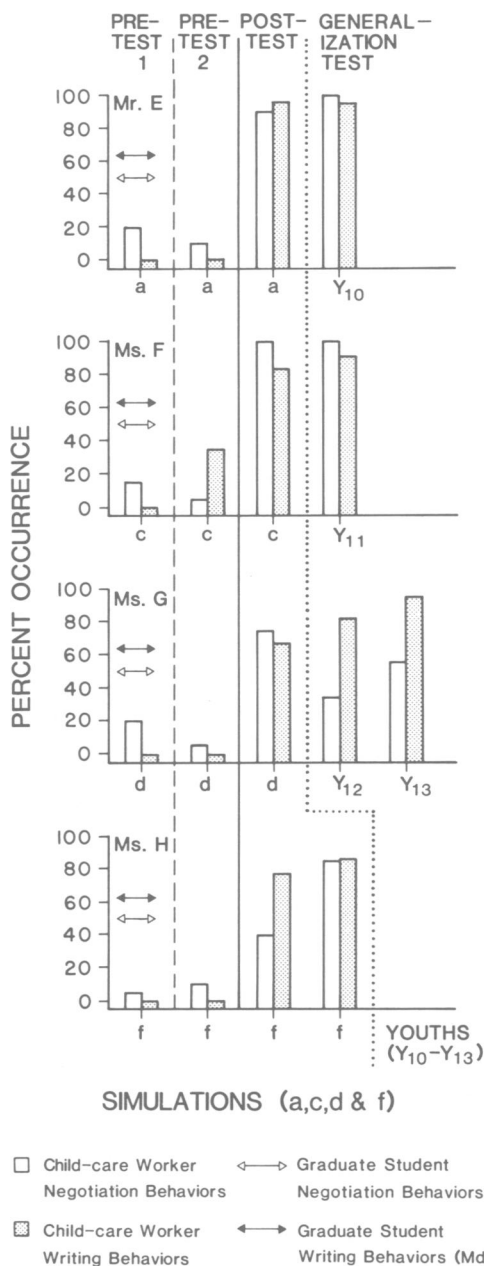


Figure 3. The percentage occurrence of required negotiation and writing behaviors produced by the 4 child-care workers who participated in Experiment 2. The symbols have the same meaning as in Figure 2. Ms. H was unavailable for generalization testing because she was transferred to another residence.

cause she forgot to use the checklist. Still, they remained well above pretest levels. Ms. H was not available for a generalization test because of a transfer to another group home.

DISCUSSION

The training manual increased both the negotiation and contract writing skills of the CCWs to a level of proficiency that equaled or surpassed that of behaviorally oriented graduate students. In Experiment 1 the manual plus minimal feedback produced substantial increases in both negotiation and writing behaviors in all CCWs. The fact that these increases occurred during the first posttest simulation with all 4 CCWs, and further increases did not occur in subsequent simulations, suggests that the behavior change was almost exclusively due to the manual rather than to the minimal feedback that followed each posttest simulation. The results of Experiment 2 confirmed that the positive change in CCWs' negotiation and writing behaviors could be attributed to the manual alone rather than to feedback or repeated practice during training.

In Experiment 2, the mean time spent studying the manual was 49 min; this was not supplemented by any additional training from a professional. Thus, the manual should appeal to practitioners because it is both effective and efficient. Professionals responsible for staff training can rely on the manual as a primary vehicle for skill acquisition. Of course periodic observation and feedback should be provided to facilitate skill maintenance. The manual also should appeal to researchers because of its standardized protocol and amenability to procedural reliability assessment.

In most cases contracting was one component of a multicomponent intervention designed to reduce absconding from a residence or group home. In other cases contracting was used as the sole intervention to treat problems such as truancy and aggression. In the latter case CCWs found it difficult to perform interobserver reliability checks; therefore youth behavior change data were not presented. However, consumer satisfaction data are

available. Three of the 4 CCWs who participated in Experiment 2 (Ms. H was transferred to a new residence) completed a consumer satisfaction questionnaire. A 4th CCW (Ms. H's replacement) who did not participate in Experiment 2 but who later read the manual and negotiated several contracts also completed the questionnaire. Seven questions concerned satisfaction with contracting as a treatment technique, utility of the manual, likelihood of continued use of contracting, and likelihood of recommending that new staff members read the manual. For each question, response options ranged from 1 to 7 (1 = completely dissatisfied; 7 = completely satisfied). This method of assessing consumer satisfaction is analogous to the method used by Achievement Place group homes (Phillips, Phillips, Fixsen, & Wolf, 1974). The mean consumer satisfaction rating was 6.2 (range, 5 to 7), indicating that the manual, in addition to being effective and efficient, possesses considerable social validity.

REFERENCES

- Alexander, J. F., & Parsons, B. V. (1973). Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. *Journal of Abnormal Psychology, 81*, 219-225.
- Allison, T. S., Kendall, S., & Sloane, D. (1979). New directions in a juvenile hall setting. In J. S. Stumphauer (Ed.), *Progress in behavior therapy with delinquents* (pp. 73-90). Springfield, IL: Charles C Thomas.
- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis, 1*, 91-97.
- Bergman, R. L. (1975). Behavior contracting with chronic schizophrenics. *Journal of Behavior Therapy and Experimental Psychiatry, 6*, 355-356.
- Billingsley, F., White, O. R., & Munson, R. (1980). Procedural reliability: A rationale and an example. *Behavioral Assessment, 2*, 229-241.
- Blechman, E. A. (1974). The family contract game. *The Family Coordinator, 23*, 269-281.
- Blechman, E. A., Olson, D. H. L., Schornagel, C. Y., Halsdorf, M., & Turner, A. J. (1976). The family contract game: Technique and case study. *Journal of Consulting and Clinical Psychology, 44*, 449-455.
- Boudin, H. M. (1972). Contingency contracting as a therapeutic tool in the deceleration of amphetamine use. *Behavior Therapy, 3*, 604-608.
- DeRisi, W. J., & Butz, G. (1975). *Writing behavioral contracts: A case simulation practice manual*. Champaign, IL: Research Press.

- Gotestam, K. G., & Bates, S. (1979). Behavioral contracting: Principles and practice. *Behavior Analysis and Modification*, **3**, 126-134.
- Homme, L. E. (1971). *How to use contingency contracting in the classroom*. Champaign, IL: Research Press.
- Jayarathne, S., Stuart, R. B., & Tripodi, T. (1974). Methodological issues and problems in evaluating treatment outcomes in the Family and School Consultation Project, 1970-1973. In P. O. Davidson, F. W. Clark, & L. A. Hamerlynch (Eds.), *Evaluation of behavioral programs in community and school settings* (pp. 141-174). Champaign, IL: Research Press.
- Jessness, C. F. (1976). The youth centre project: Transactional analysis and behavior modification programs for delinquents. *Behavioral Disorders*, **1**, 27-36.
- Mann, R. A. (1972). The behavior-therapeutic use of contingency contracting to control an adult behavior problem: Weight control. *Journal of Applied Behavior Analysis*, **5**, 99-109.
- Peterson, L., Homer, A. L., & Wonderlich, S. A. (1982). The integrity of independent variables in behavior analysis. *Journal of Applied Behavior Analysis*, **15**, 477-492.
- Phillips, E. L., Phillips, E. A., Fixsen, D. L., & Wolf, M. M. (1974). *The teaching family handbook*. Lawrence, KS: Bureau of Child Research, University of Kansas.
- Stuart, R. B. (1980). *Helping couples change: A social learning approach to marital therapy*. New York: The Guilford Press.
- Stuart, R. B., & Lott, L. A. (1972). Behavioral contracting with delinquents: A cautionary note. *Journal of Behavior Therapy and Experimental Psychiatry*, **3**, 161-169.
- Walter, H., & Gilmore, S. K. (1973). Placebo versus social learning effects in parent training procedures designed to alter the behaviours of aggressive boys. *Behaviour Research and Therapy*, **4**, 361-377.
- Weathers, L., & Liberman, R. P. (1975). Contingency contracting with families of delinquent adolescents. *Behavior Therapy*, **6**, 356-366.
- Winett, R. A. (1973). Parameters of deposit contracts in the modification of smoking. *The Psychological Record*, **23**, 49-60.

Received July 7, 1986

Initial editorial decision October 6, 1986

Revisions received October 1, 1987; December 7, 1987;
March 28, 1988

Final acceptance March 29, 1988

Action Editor, Ron Van Houten

APPENDIX

Problem Descriptions Used During Simulations

a. Three weeks ago John began to attend public school. The first week went fine. At the end of the

second week his teacher telephoned you to report that John had skipped five classes that week. You spoke to John about this. He said he skipped the classes because he hates math and English. He said he spent those classes sitting in a bus shelter talking to friends who also had skipped the classes. At the end of your talk with John, he agreed not to miss any more classes. However, you just found out from John's teacher that he skipped three classes this past week.

b. Bill is continually getting into fights with the other kids in the cottage. Any time another youth does or says something Bill does not like, he punches that person. You have observed that the other kids do not seem to go out of their way to antagonize Bill. He just has a short temper. In addition, the other kids are afraid of him and Bill appears to enjoy the "respect" that comes with being tough. You have had numerous talks with Bill to explore the reasons for his aggressiveness but nothing much has come out of them. Bill has had four fights in the last 7 days.

c. One of Ralph's major problems is his appearance. He is 16 years old but he has not learned to groom himself properly. He rarely washes or showers and consequently his face and hands always look dirty. Similarly, he rarely brushes his teeth and each year he gets many cavities. In addition, his shirttail is always out of his pants, his zipper on his pants is frequently undone, and the laces on his sneakers are seldom tied. You have spoken to Ralph about his appearance many times. Each time he tells you he "forgot" to shower, etc. You observed Ralph after breakfast and lunch each day for 7 days and you noticed he had showered 0 times, had brushed his teeth 0 times, had his shirttail out 9 times, had his zipper down 6 times, and had his laces untied 10 times.

d. Frank has been doing poorly in math this year and he is in danger of failing the course. His teacher believes Frank could pass if he did some extra work. Consequently, the teacher gave Frank 10 math questions to do as homework each night for 6 nights. The problem is that on 4 days he answered only three questions and on 2 days he answered none. Frank says the questions are too

hard and that he does not know how to do them. The teacher does not believe this because the few questions Frank does attempt he usually answers correctly. The teacher is aware that you get on well with Frank and so she has asked you to “do something” to get Frank to do his homework at night so he won’t fail the course. You spoke with Frank about the problem several days ago but he still isn’t doing the homework.

e. Fred has a problem with his manners. When Fred wants to speak to a staff member or another youth, he simply walks up to the person and starts talking, regardless of what the other person is doing. Staff find this annoying because Fred frequently starts talking to them when they are in the middle of a conversation with someone else. Also, during group meetings, Fred often will talk loudly to another youth while someone else in the group is trying to discuss something. In general, Fred never waits for an appropriate time to begin talking and he never says “excuse me” before he interrupts. On several occasions you asked Fred not to interrupt other people’s conversations, or at least say “excuse

me” before interrupting. Your talks have not had much effect. In the last 2 days Fred has interrupted staff members 16 times. During the last two group meetings, Fred interrupted five and six times respectively.

f. The youths in your cottage are supposed to attend a group meeting on Mondays and Thursdays at 4:00 p.m. after school. Staff feel these meetings are very useful for resolving routine problems which arise in the cottage. Dave hates these group meetings because sometimes staff confront him with a problem behavior and he does not like being “put on the spot.” He claims he would rather watch TV or play cards during this time. Dave is very good at finding excuses for missing these meetings. Sometimes he has a headache and has to lie down, or he may have to stay late at public school for a variety of reasons. When he does attend, he will not answer any questions except by saying, “I don’t know.” You have spent some time discussing this problem with Dave in the past. After each discussion with you, he attends one or two groups but then lapses back into his old pattern.