Three Case Studies of Behavior Therapy with University Students.

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ABSTRACT

Three studies of behavior therapy by a therapist who was also the clients' instructor are reported. All of the clients defined target behaviors, collected data, and implemented procedures to modify the behaviors. The data were brought to each session for analysis and revision each week. Case 1 reported modification of stealing behavior, where both impulses to steal and actual stealing behaviors were reduced. Time spent in negative self-evaluations was also decreased. Case 2 involved decreasing sulking behavior over a spouse's marital infidelity. Case 3 presented modification of job satisfaction, resulting in an increase of smiles, verbal behavior, i.e. initiating conversations, and contact with colleagues. (Author)
Three Case Studies of Behavior Therapy
with University Students

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Running Head: Behavior Therapy
Abstract

Three studies of behavior therapy by a therapist who was also the clients' instructor are reported. All of the clients defined target behaviors, collected data, and implemented procedures to modify the behaviors. The data were brought to each session for analysis and revision each week.

Case 1 was the modification of stealing behavior, as both impulses to steal and actual stealing behaviors were reduced. Time spent in negative self-evaluations was also decreased. Case 2 involved decreasing sulk ing behavior over a spouse's marital infidelity. Case 3 modified job satisfaction as smiles, verbal behavior ("speaks" and discussions) and contact with colleagues were increased.
Case 1: Stealing Behavior

A university junior enrolled in a course in Educational Psychology requested a conference to discuss something "personal." The student indicated he had a problem he had been intending to talk over with someone. After some hesitation, he said he had a problem of "taking things" from stores. He indicated he was very puzzled by his behavior because he often had the funds to purchase the items taken. He had read some psychological literature regarding the personality dynamics assumed to be related to such behavior, but it had not helped him to change his own behavior. He mentioned Freudian proclamations regarding love relationships in early development, but had difficulty applying such concepts in his own family constellation.

A related problem, he continued, was that he engaged in negative self-evaluations, covertly calling himself weak, dishonest, a cheat, thief, etc. These self-evaluations generalized to other aspects of himself as a person. These covert verbal behaviors apparently consumed hours of his time and were interfering with his functioning as a student.

His first assignment was to self-record how many times he thought about taking an object during the next week, and to describe in brief narrative form exactly where he was and what had been going on in his environment just prior to the behavior, and to record what happened immediately after the behavior occurred. He was also instructed to begin recording how many minutes he spent in what he was told to call "self bad-mouthing."

He returned the next week (Week 1) with his data and reported the following: He had had an impulse to take something six times during the week, three of them on one day, but had emitted the actual behavior only once (see Figure 1). He indicated that if he had not been in therapy he was sure he would have emitted

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Insert Figure 1 about here

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the behavior more than once. He confirmed that the act of data collection had served as a restraining condition. This is a type of observational reactivity reported by several investigators (Shapiro and Zifferblatt, 1976).

The data collection had taught the student some things about his behavior. First, it was established that the impulses to steal were related to his general "mood." He reported he was generally in a "funk" when the impulse occurred.

It was often the case that he had no classes to attend immediately, and no pressing assignments due that demanded his attention. A possibility existed that a factor of boredom was related to his behavior. The stealing behavior may have been a way of creating some excitement and risk into his apparently otherwise rather conservative lifestyle.

The data on "self bad-mouthing" showed a median of 88 minutes with a range of 20 to 250 minutes over a 5-day period (see Figure 2).

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The third session was similar to the preceding one in that data from the preceding week (Week 2) were analyzed. Figure 1 shows that the number of impulses to steal was 12, with two stealing behaviors occurring in two different locations. In further conversation it was established that for the past two years, almost all of his stealing behaviors were occurring in one particular department store. He had worked on a system for emitting the behavior in this store that was highly successful. It was further established that his stealing was not a situational phenomena that occurred because of extenuating circumstances. In every case the behavior was planned carefully, with appropriate clothing worn and time of day controlled.
The self bad-mouthing was down to a median of 43 minutes with a range of 5 to 70 over a 7 day period (see Figure 2).

During this third session actual treatment procedures were initiated. Vicarious imagery procedures were begun. The student was asked to close his eyes and imagine himself being caught engaging in the stealing behavior. The student was asked to describe what events he saw occurring in his imagination. Imagining future aversive consequences is a technique described by Ferster (1965). He reported he visualized a clerk holding his arm and calling the manager. He visualized the manager talking to him and taking him to an office. He then reported seeing a police officer arrive, take his arm, and walk him to a patrol car. He then imagined himself being finger-printed at the police station, and his parents being called on the phone. Next, he pictured the embarrassment and disappointment of his father as he was being driven home (since the items were always under $50.00 he did not imagine he would be jailed). He then imagined his name in the local newspaper, and his friends laughing behind his back.

If at any point during this imagery the student paused longer than a couple of minutes, the therapist would ask "what else"? When the initial imagery was completed, the student was asked to run through it again. Some of the episodes were verbalized in the run through rather than the first attempt, but the above is representative of the student's imagery.

At the conclusion of the second imagery, the student was asked how he felt since he appeared to be experiencing anxiety. He reported his heart was pounding and he felt dizzy. After these physical reactions had subsided, the student was asked to remember occasions in which he had shown behavior that would be considered to be honest, fair, or "morally right" by interpretation.
After some scanning, the student was able to remember that once he had refused to cheat on an exam when other students around him had been doing so. He was also able to describe that a clerk in a bank had accidentally given him $5.00 over the amount of a check he had been cashing, and he had returned the overdraft. He seemed to remember several incidents concurrently, as he hurriedly described that he also had frequently worked overtime on a job and had not charged the employer for an extra 10 to 15 minutes as others had previously done. He indicated that such episodes of "honest" behaviors had not been happening for the last several years.

The student was asked if he would like to become the type of person that engaged in more of these "honest" behaviors with an absence of the dishonest ones, and he replied that he would.

First, the student was given an injunction that he was no longer, under any circumstances, to enter that particular department store in which he had developed a "system." There were two reasons for this injunction. Steiner (1971) has described the role of injunctions in alcoholism therapy, and this seemed a comparable situation. Also, not entering that particular store would eliminate any effects of stimulus control over his behavior (see Shapiro, et al.).

Second, the student was told that every time he looked to see what time it was during the next week, he was to remember an episode from an earlier occasion in which he had shown "honest" or "morally right" behavior. This is an adaptation of Homme's coverant control (1965). The student was asked to simulate overtly such an occasion. In addition, any time the student experienced an impulse to steal, he was to immediately begin visualizing the sequence of events previously imagined regarding being caught engaging in stealing behavior. Also, the student was asked what he could do to reduce the amount of time that he spent self bad-mouthing. He suggested that he should spend less time in his apartment alone. It appeared that being alone in his apartment had become an $D$ for this behavior.
He suggested incompatible activities such as spending more time in the library and student center. He also decided to set aside money each week for an occasional movie.

The fourth session, one week later, the student came early and reported his data from Week 3. There had been only 3 impulses to steal, no actual steals (see Figure 1), and only one episode of self bad-mouthing that lasted about 20 minutes (see Figure 2). He also reported an increase in his confidence to handle his studies. The session was brief and he left with much enthusiasm.

He missed the next appointment, and two weeks later called to say he had had a relapse which he wanted to discuss. In this session, he said that the novelty of the procedures seemed to wane, and he had not kept data and there had been three steals in the past few days. He was asked if he was really committed to changing this behavior, because if he wasn’t, the therapist had other ways of spending his time. The student reported he wanted to go back to "square one" and try again. The vicarious imagery procedures were reintroduced, and the student was asked to come again a week later.

He kept the next appointment, brought his data from Week 4, and demonstrated that he had faithfully recorded the impulses (only 5 for the week) and there had been no steals. However, he indicated he was purposely not looking to see what time it was so that he would not have to imagine an honest behavior from his past. We decided that perhaps he should begin recording how often he engaged in this visual imagery. Self bad-mouthing was recorded at zero for 3 of the days with two episodes of 12 and 8 minutes (see Figure 2).

Data from Week 5 revealed 4 impulses to steal, 0 stealing behaviors, and 64 occasions in which he remembered an honest behavior he had emitted. Self bad-mouthing showed a continued low frequency. The session was again brief as no adjustments in the procedures seemed warranted.
He again missed his next appointment, and the therapist did not hear from him again for a couple of months. The therapist called him at his apartment to inquire about his progress, and the student reported that in the month of December when he had required several Christmas gifts, there had been a relapse, he had almost got caught, he felt sure, by a floor walker, and it had scared him sufficiently that he immediately began using the procedures again and he was doing just fine. He reported that he no longer thought it was necessary to record data, and, in fact, he had not been doing so for the past month.

Case 2: Sulking Behavior

A 24 year old married male requested assistance with a problem of his spending excessive time engaging in thoughts about his wife's admission of marital infidelity. The client reported that he spent much more time engaging in "negative thoughts" about his wife's behavior, which were accompanied by thoughts he characterized as being evidence of self-pity and "poor me" kinds of attitudes. Although he had read popular literature regarding transactional analysis and marital adjustments, and suggested he was making progress on working on many of the interactional problems in the marriage that he had identified, it had not changed his behavior of ruminating about his wife's behavior.

The client was instructed to begin recording the number of minutes he engaged in the behavior, location in which these behaviors occurred, and the events that were preceding periods of this obsessional thinking. Duration of these episodes in minutes were recorded on a clipboard he had to keep with him for his job.

The student returned in one week and reported the median number of minutes spent per day in the sulking behavior was 157 with a range of 72 to 188 minutes. An interesting observation was that on the two days when the behavior was lowest, the days of the week were Saturday and Sunday when the client was home. The week days the sulking behavior occurred while the client was working.
The client worked as a delivery man for a pharmacy and delivered prescriptions to customers. It appeared that the sulking behaviors were occurring most frequently while the subject was in his own car while driving and making deliveries.

Since the client already had knowledge about the effect of stimulus control and behavior, it was suggested that perhaps the car had become an $S^D$ for this behavior.

The next week the client was asked to record the frequency of sulking behaviors in his car separate from sulking in other places. When he returned with these data the next week, he found he had a median of 126 minutes sulking while in his car, but the out of car median was 12 (see Figure 3).

The next week it was decided to attempt utilization of stimulus control procedures. Since most of the sulking behavior was occurring in the car, that seemed to be the logical place to begin. If the client could have afforded it, trading cars as an initial attempt to change the association of riding in the car with sulking behavior would have been ideal, but other attempts were implemented. The client was instructed to change the environment inside the car in the following way:

1. He was instructed to play the radio. The client was not in the habit of turning the radio on while driving.

2. He was also instructed to lower the windows to allow the passage of air and to permit sounds external to the car to become more dominant.

3. The subject was instructed to make every attempt to not think about his wife's behavior while in the car. If these thoughts were "bleeping in," he was to stop the car, get out, and think about them for awhile (he was actually told to enjoy his misery) and then...
return to the car and attempt to think about other things while driving.

This procedure was moderately successful. The median number of minutes in car was 81 and the out of car median was 20. However, the client admitted he had not found it possible to stop the car and get out when the obsessive thoughts were occurring, and it was obvious from the data the obsessive thoughts were still too high. He was adamant about abandoning this procedure as unworkable.

The next procedure suggested was to solicit from the client a list of his wife's positive attributes. He mentioned such things as her appearance, she was a good mother, she was a very good hostess and popular with his relatives, and she was a good housekeeper. It was recommended that procedures for increasing these thoughts be increased. The client was instructed that every time he was stopped by a traffic signal, he was to think about one of his wife's positive attributes (Homme, 1965). At times when he was driving; he was to do the following: He was instructed to have 3 things he was looking forward to enjoying. The first was to be something fairly immediate, such as a coke at the next drive-in he passed. The second was something a little more remote, such as his favorite TV show that evening. The third was some event more remote, such as what he planned to do with a rather large amount of income he was to receive in two weeks. He was encouraged to make these anticipated events realistic and obtainable, and to change them if the anticipation of them did not seem to occupy his thoughts.

These procedures appeared very effective as the median in car was reduced to 23 and the out of car was 8. He reported that he was much more comfortable during this week and he was able to show his wife much more affection of a spontaneous nature. It was decided to continue these procedures for another week.
The client expressed great concern that perhaps these results were a "fluke" and the progress made would not persist. The therapist discussed the effects of experimenter expectancy on research results, and suggested that if he expected the positive results to continue with these procedures, it would probably work out that way. If he expected the behavior to deteriorate, they just might. He left the session determined to make the results hold.

The following week the in-car median was 6 and the out of car median was 2. He seemed very relaxed and reported many desirable side effects, which included improved ability to concentrate on his reading material required for his courses and improved intimate relations with his wife. We decided that if the data were as encouraging after one more week, therapy could be terminated.

The next week he reported a median of in-car minutes at 3, with no out of car thoughts occurring. The client decided not to return for another session.

Case 3: Job Satisfaction

A 28 year old single female enrolled in a graduate course in Educational Psychology indicated she wished to do something to change her "attitude" toward her job. She was a certified teacher who had been involuntarily placed as a resource teacher in an Instructional Materials Center in a parochial school. She was in the beginning of her second year in the position, and she had already informed her principal she intended to submit a letter of resignation in December to become effective in January.

She said that she was reasonably confident the pupils who came to the Center received help, but the problem was that the teachers were not referring pupils to her. She also indicated that the principal and other teachers in the building were not friendly toward her.
The therapist asked her to keep data on the number of pupils who entered the Center for assistance. The pupils' duration of remaining in the Center was not observed. She was also asked to record each new referral. These data were collected for 14 days.

There was a median of 9.5 pupils per day entering the Center and there were two new referrals to the resource room during this period (see Figure 4). When the client was asked what these data suggested to her she replied that she and the Center facilities were very underutilized. She indicated she spent much time engaging in unnecessary organizing and cataloguing activities so that she appeared to be busy.

The therapist probed to discover if she had made any attempts to increase the number of pupils using the resource room, and she apparently had made few, if any, attempts in this direction. It also became apparent that she had no academic background, experience or even interest in this type of position. She did not understand the rationale for her placement as a resource room teacher.

When the therapist inquired what her fellow teachers did that made her assume they were unfriendly, she reported the following:

a.) Remarks to the effect she had a soft job because she did not have a self-contained class and that she had more freedom and fewer problems.

b.) Exclusion from much of the conversation and "gossip" before and after school.

c.) Avoidance of coming into the Center except when absolutely necessary.

Her reaction to this situation was to avoid contact whenever possible with her colleagues. She indicated she arrived at school early so that she could avoid having to interact with the teachers.
The client seemed to be aware that the teacher's behavior toward her was probably functionally related to the number of pupils referred to the resource room. She confirmed the therapist's expectations that her social relations with the teachers and principal were probably inadequate. The therapist had observed that in his class she seldom interacted with other students. Before class she would either bring a book and read or rest her head on her hand turning away from the person sitting next to her, all of which decreased the probability that anyone would speak to her. Less frequently she would lay her head down on her desk until class began. The client was then asked to continue collecting the data on the number of pupils and new referrals for another week, and in addition, record the number of times she spoke to a teacher. "Speaks" were defined as any verbal behavior normally considered as a greeting, such as hello, how are you, nice day, etc. She was also asked to record the number of times she smiled at one of the teachers or the building principal. She was also asked to record the number of discussions she shared with the same group. A discussion was defined as any interchange that involved over three interchanges. This would preclude such exchanges as "How are you?" "I'm fine." "Good." These discussions could be either personal or professional.

The client recorded the pupils entering the resource room with a grocery store counter, the speaks on a golf wrist counter, and the smiles on an index card she cut to the proper shape and carried in a costume jewelry locket.

In the next 5 days (Week 1) a median of 9 pupils came to the Center, which was virtually the same frequency as the preceding 14 day period because the same pupils came on the same schedule each week (see Figure 4). In case of absences, the pupils often made up their time. There were no new referrals during this period.
The median number of smiles was two, speaks was 13, and discussions were 0 (see Figure 5).

In analyzing these data the client reiterated that while she worked effectively with pupils, her interpersonal relationships with faculty required change. She hypothesized that if these relationships were improved, more pupils might be referred to her for services.

The client was instructed to arrive at school at the time other teachers normally entered the building. Furthermore, she was instructed to use the main entrance instead of a side entrance she had been entering. She chose not to eat in the school cafeteria because some students were in the Center during this time and could not be left unsupervised.

A goal was set to double the number of speaks, and to insure that in one week every faculty member was spoken to at least once. She also suggested she would attempt at least 5 discussions in the next five day period. This procedure could be described as personal goal setting on an informed contingency contract (Homme, 1970).

It was assumed that smiles would probably increase as a function of the other procedures.

Figure 5 data from Week 2 showed an increase of speaks to a median of 23, and the criteria of speaking to every faculty member at least once was met. The number of discussions increased to a median of 3, although she initiated every discussion (see Figure 5).

Incredible as it may seem, the smiles were the source of some concern for the client. The therapist had observed the client before and after her Educational Psychology class, and noticed that she rarely smiled or interacted with classmates. Inferentially, the client seemed to engage in behaviors that reduced the probability of speaking or interacting (e.g., reading book, sitting with head down on table, avoiding eye contact, etc.).
The client reported the smiles were "forced" and did not seem to be spontaneous and natural, but she was making an effort. She was encouraged that if she continued these efforts the probability was that they would become more "natural."

All data collection activities and procedures were to be continued the next week.

The following week (Week 3) the client reported that smiles were up to a median of 33, the discussions median was 8, with 4 of them teacher initiated, and the smiles median increased to 13 (see Figure 5). The frequency of pupils entering the Center increased to a median of 13, while the week 2 median had been 8, and there was a total of 6 new referrals (see Figure 4).

In Week 4 the median frequency of students entering the Center was 22, with three new referrals, the median smiles was 24, smiles leveling at 34, and discussions were up to a median of 5. The client reported that with the increase in referrals more of her time was being spent in prescribing curricular materials which left less time for discussions. She also reported the room was becoming cluttered and less attractive visually, but this was compensated by the increase in other endeavors.

By this session the client preferred to terminate therapy and write the results for an outside assignment for the course, but she was persuaded to continue data collection procedures for one more week. She had told her principal she no longer intended to resign, and the client thought the principal seemed genuinely pleased with her decision. Prior to these procedures, the principal had suggested that perhaps the client did not have the right "personality" for a resource room teacher.

During Week 5 the median frequency of students entering the Center was 21, with 3 new referrals. The median smiles was 25, smiles 30, and discussions 4.
These procedures had a noticeable effect on the student's appearance and behavior. She appeared much more alert in class, appeared to be spending more time in grooming behavior. She reported her parents who lived nearby had expressed some surprise regarding how happy she seemed to be lately.
References


Homme, L. E. Perspectives in psychology: XXIV. Control of caverants, the operants of the mind. Psychological Record, 1965, 15, 501-511.


Figure Caption

Figure 1. Frequency of impulses and steals in Case #1.
Figure 2. Minutes spent sulking in Case #1.
Figure 3: Minutes spent sulking in Case #2.
The graph shows the duration in minutes over a series of consecutive days, with three distinct phases labeled: Baseline, Stimulus Control, and Positive Coverants.

- **Baseline**: The duration in minutes for being in the car shows a general downward trend with some fluctuations.
- **Stimulus Control**: The duration for being in the car peaks and then shows a decline, with the duration for being out of the car increasing.
- **Positive Coverants**: Both durations for being in and out of the car decrease significantly.

The graph uses different markers for being in the car (solid dots) and out of the car (open circles).
Figure Caption

Figure 4. Frequency of pupils entering resource center and new referrals in Case #3.
BASELINE

WEEKS

CONSECUTIVE CLASS DAYS

FREQUENCY OF PUPILS

NEW REFERRAL
Figure 5. Frequency of smiles, speaks, and discussions in Case #3.