TRAINING UNDERGRADUATES IN BEHAVIOR THERAPY AND BEHAVIORAL COMMUNITY PSYCHOLOGY

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Abstract

A class of undergraduates, enrolled in a psychology internship program, were provided training in behavior therapy and behavioral community psychology. At the beginning of the quarter, each undergraduate selected and operationally defined a behavior to chart and ultimately modify (e.g., studying, weight control, etc.). After the undergraduates had collected baseline data and implemented interventions on their self - control projects, they began gathering data on a community problem (e.g., vandalism, environmental hazards, litter, energy waste). The projects provided the undergraduates a real - life experience for understanding the process of effecting behavior change at the individual and community levels. Of most importance was the opportunity provided the undergraduates for exploring an alternative conceptual model, the community psychology approach, for extending mental health services.

In delivering mental health services, behaviorally oriented para - professionals can be trained in either a traditional, community mental health, or community psychology conceptual model (Jason & Glenwick, 1980). Traditional training involves a late treatment focus, a passive - receptive stance, and a 1:1 treatment modality (e.g., psychotherapy). In contrast, a community mental health approach stresses an active involvement in the community, an earlier treatment focus, and an extension of the reach of services through consultation and para-professionals. Finally, a community approach focuses on primary prevention (i.e., insuring that high risk individuals do not succumb to disorders, preventing the establishment of maladaptive responses, enhancing the acquisition of competencies, and establishing adaptive repertoires to successfully master milestone transitions; Jason, in press) and environmental change at the organizational, community, and societal levels (e.g., effecting changes in mass transit systems, Everett, 1980; litter, Geller, 1980; energy, Winett, 1980; community education, Fawcett, Fletcher & Mathews, 1980; and population control, LoLordo & Shapiro, 1980).

College undergraduates have been trained in self - control, behavioral procedures (e.g., self - reinforcement or punishment, controlling antecedent behaviors, substituting incompatible behaviors, etc.) in order to either decrease personal, bothersome, maladaptive behaviors or increase positive, functional behaviors (Geller, 1972; Barrera and Blasgow, 1976; Watson and Tharp, 1972). In addition, undergraduates have been effectively used as paraprofessionals in numerous behavioral interventions. For example, paraprofessionals have provided behavioral supportive companionship services to unviersity undergraduates in distress (Wasserman, McCarthy — Ferree, 1975), tutored second graders with academic and problem behaviors (Robertson, DeReus & Drabman, 1976) and enhanced academic abilities in economically disadvantaged toddlers (Jason, 1977). In fact, a recent comprehensive review article by Durlak (1979) indicated that paraprofessionals were at least as effective as professionals in bringing about therapeutic change on a wide variety of clinical problems. The vast majority of these interventions have been aimed at individuals or groups with either early indentified or well - crystallized behavioral

disorders. In other words, paraprofessionals have been employed almost exclusively in community mental health type interventions. Conceivably, paraprofessionals could be utilized in an alternative conceptual approach, that is, a community psychology model.

As previously mentioned, a community model features primary preventive interventions and environmental modification projects. Paraprofessionals could be utilized in assessing and modifying community problems such as energy waste, vandalism and theft, environmental litter, aversive noise levels, and inefficient mass transit systems. The mental and physical health and well being of residents within a community is directly and indirectly affected by these types of environmental irritants. More than likely, many person - centered change projects will fail when environmental hazards (e.g., dilapidated housing, inadequate schools, unsafe neighborhoods) continue to exert pernicious influences on clients. In addition to traditional training programs which have focused on bringing about changes in individual behavior, paraprofessionals might profit from exposure to change efforts which encourage them to focus on environmental variables as legitimate targets for change. Bouchard (1980) has recently argued that providing nonspecialists with the abilities to competently analyze contingencies operating on their own behaviors as well as on social systems might help stimulate more effective participation of citizens in community life.

The present study was aimed at providing undergraduates a didactic and experiential course focusing on behavior therapy and behavioral community psychology. The primary thrust of the course was to acquaint students with the systematic application of behavioral principles to clinical and community problems. The study evaluated whether undergraduates could be trained to implement effectively a personal self - control project, as well as a community - oriented intervention. Both projects were intended to provide the undergraduates with critical foundational skills to be employed during a year - long internship experience at various mental health facilities.

Method

The study involved a class of twenty - two undergraduate psychology majors at DePaul University.[1] Thirteen of the students were females and nine were males. Fifteen were white, six were Black, and one was Latino. All the students had been formally accepted into an internship program during the Fall Quarter of their junior year. The undergraduates in this program had all previously taken the following psychology courses: introductory, statistics, experimental, developmental, social, and abnormal. During their junior year, the internship students enroll in a two - quarter sequence in applied psychology. During their senior year, students are provided a nine - month part - time fieldwork experience in a mental health facility, earning four hours of credit during each of three quarters. Internships available include those which provide experiences in working with children and adolescents in a psychiatric hospital, a rehabilitation facility, a community mental health center, a neighborhood settlement house, a school, and other community agencies.

The present study occurred during the first applied psychology course. The course was designed to convey a basic overview of behavior therapy and behavioral community psychology. The undergraduates were required to read Nietzel, Winett, MacDonald, and Davidson's (1977) text entitled *Behavioral Approaches to Community Psychology*. The course focused on identifying the unique contributions of behavioral

approaches and community psychology in more effectively treating disorders and improving the style for delivering mental health services. The undergraduates were instructed in the following areas: selecting, defining, and charting behaviors; choosing appropriate operant designs; obtaining satisfactory reliability estimates; and analyzing the results of interventions. Concrete, applied examples of behavior therapy and behavioral community interventions were presented.

During the first week of class, each undergraduate selected a personal, bothersome behavior to modify. After each behavior was operationally defined, the undergraduates began monitoring and charting these behaviors each day. During the third and fourth weeks of the quarter, the undergraduates were asked to select an environmental problem to assess and possibly modify. The undergraduates were given the option of working in teams of two on these community projects. In these environmental projects, undergraduates were asked to obtain at least one reliability check during each phase of their study.[2] In working on the self - control and community interventions, the students were given the option of selecting a simple A-B, reversal, multiple baseline, or alternating treatment design (Hersen & Barlow, 1976). Each week, one hour of class time was devoted to discussing the various self - control and environmental projects.

Results

Self - Control Projects

Studying. Five undergraduates selected studying as their target behavior. One student, after collecting 32 days of baseline data, realized that she was spending an adequate amount of time studying and therefore did not need to increase studying. Another undergraduate noticed improvements in her studying solely by self - monitoring (studying had increased from an average of 15 minutes to 52 minutes per day). The remaining three students set up specific behavioral contracts, whereby self - rewards (e.g., a desired gift, going out Saturday night) were made contingent upon specific increases in studying. Using a multiple baseline design, treatment was instituted after 22, 33 and 43 days of baseline. For the three undergraduates, with onset of the intervention, daily studying increased from 24 to 105 minutes, 57 to 86 minutes, and 81 to 231 minutes.

Smoking. Four undergraduates selected the number of cigarettes smoked each day as their target behavior. In order to reduce smoking one undergraduate used an incompatible response, chewing gum, after experiencing an urge to smoke. Using this procedure, her daily average rates of smoking were reduced from 7.1 to 5.9 cigarettes per day. Two other undergraduates obtained decreases on daily cigarettes smoked by setting up behavioral contracts. Each day one student abstained from smoking, he contributed 80 cents to a fund which would ultimately be used to purchase a file cabinet. With onset of this zrategy, average daily rates of smoking decreased from 19 to .6, and he was able to purchase a file cabinet with the money which had been contributed to his anti - smoking fund. Another undergraduate, who rewarded herself with purchase of clothing or a night out for specified reductions in smoking, decreased her average daily rates of smoking from 14.7 to 6.2 cigarettes. During a 12 day return to baseline, the gains were maintained (i.e., an average of 5.1 cigarettes were smoked daily). The last undergraduate who smoked an average of 14.4 cigarettes per day, employed an aversive behavioral technique, donating a quarter to a despised organization whenever more than six cigarettes were consumed in a day. This tactic helped the undergraduate completely quit smoking.

Food - Related Behaviors. Four undergraduates designed self - control projects which focused on food related behaviors. One undergraduate decreased the number of daily teaspoons of sugar from an average of 6.5 to 1.8 by (a) substituting juices for coffee or tea; and (b) visualizing an immense pile of thirty pounds of sugar whenever an urge for sugar arose. Another undergraduate increased the number of daily nutritious meals from an average of 2.8 to 5.2, with his wife's presence at home as his treatment condition. With a return to baseline, the number of daily nutritious meals dropped to an average of .4. The undergraduate had a clear demonstration of problems associated with exclusively relying on the presence of significant others to obtain behavioral change. Another undergraduate reduced daily caloric intake from 1323 to 1052 by carefully preparing her own meals instead of eating out. A positive by - product of this intervention was that the student reported saving $65.00. During the return to baseline phase, calorie intake returned to the initial baseline level.

The final intervention in this section involved an underweight undergraduate who established two goals: (a) consuming at least 3,000 calories a day; and (b) exercising at least three times weekly. Self - monitoring was the only strategy used in this self - control intervention. During the monitoring phase, the student exceeded 3,000 calories 30% of the days and exercised an average of 3.5 times per week. As a result of the program, the undergraduate found himself "eating better and more regularly," and he considered the self - control project a success.

Interpersonal Interactions. One student allowed herself to go out on weekend evenings only if she was late meeting friends not more than once each week. Using this strategy, she reduced her time late from an average of 80 seconds to 6 seconds. During a return to baseline phase, her time late increased to an average of 36 seconds. Another student tried to increase the amount of time he talked with his mother over the phone each week. This undergraduate rewarded himself with positive self statements when he reached the goal of 30 minutes of conversation each week. During the intervention phase, the student increased the time talking with his mother from an average of 8.4 minutes per week to 30.1 minutes per week. Levels of communication dropped to 0, however, during a return to baseline phase. At the end of the course, the student re - instituted the treatment condition in order to inncrease the time he spent talking with his mother. One student, who hit others on the arm while talking, reduced this behavior from a daily average of 10.6 to 7 following an intervention which consisted of instructing friends to provide feedback by hitting her on the arm whenever she hit them. Swearing behaviors in another undergraduate were reduced from an average of 9.3 to 2.2 per day, following implementation of the intervention which consisted of placing the recording pad used to minotir swearing in inconvenient places (i.e., in a locker at school).

Assorted Interventions. The remaining four undergraduates implemented a potpourri of self - control interventions. For example, one undergraduate, who complained of rough and harsh hands, reported considerable improvements in this problem when he began using a soap with lanolin as opposed to a canvas soap. When another undergraduate made going out on Saturday night contingent upon not putting more than one thing off each day, her problem behavior was reduced from 2.3 to .2 times per day. During an 18 day return to baseline phase, the undergraduate attained a perfect record by not putting anything off.

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Excessive spending was the target behavior selected by another undergraduate. During the baseline phase, this student spent an average of twelve dollars and twenty cents a day. Her intervention consisted of carrying no more than five dollars and travelling from school to home on a route which avoided shopping areas. During the intervention phase, spending was reduced to four dollars and seventy cents per day. When the baseline condition was reinstituted for fourteen days, spending rose slightly to five dollars and forty cents.

The last self - control intervention involved an effort to reduce excessive television watching. Employing an ABAB design, television watching was reduced from an average of 173 minutes to 60 minutes per day when the undergraduate substituted studying for watching television. The incentives for these treatment conditions were positive self statements and the possibility of earning better grades.

Community Interventions

Three undergraduates worked on environmental projects which involved vandalism in three settings: a department store, a community parking lot, and an entire suburban community. The first intervention occurred in a section of a department store where greeting cards and games were sold. Episodes of theft were defined as packages which were open and had parts missing. During this first phase, three dollars and eighty - six cents of merchandise were vandalized daily. Next, a sign was posted by the cash registers which stated the cost of the merchandise stolen the previous day. During this week - long intervention, the amount of merchandise vandalized was reduced to an average of twenty cents each day. During a three - day follow - up phase, no episodes of vandalism occurred.

Another undergraduate monitored car vandalism which occurred in an empty lot behind her family's house. Many cars were parked at this location because of inadequate parking spaces on the street. Vandalism on cars included broken windshields, side mirrors, and antennas. Figure 1 indicates that there were an average of 2.3 daily occurrences of vandalism during the initial baseline period. For the intervention phase, a sign was placed in the middle of the lot stating the number of times vandalism had occurred the previous day. Episodes of van-

dalism were eliminated during this phase. When the feedback sign was removed, episodes of vandalism increased. When the sign was re - introduced, episodes of vandalism were once again reduced. Commenting on this project, the student wrote the following comments in her final paper: "Some of the residents have thanked me for my help in cutting down the vandalism rate. They admitted they could not think of any solutions before."

The third project, which focused on vandalism, involved an entire suburban community. Two undergraduates divided the community into five distinct areas.

Theft and vandalism statistics were obtained on a weekly basis from a local newspaper under a section entitled, "Police-/ Fire Report." The mean number of crimes in the five areas was 2.1, 3.3, 3.6, 4.6, and 10.1. The undergraduates took these data to the town's police captain. After viewing the graph, the police captain expressed interest in having more data collected; indicated he would provide the students daily statistics on occurrences of theft and vandalism based on actual police reports; and expressed a willingness to participate in a year - long project which might involve using cumulative data to help community groups curb vandalism. In their final paper, the undergraduates wrote the following: "We feel that the project was worth doing because it opened up the possibility of doing a large scale project that can be undertaken by those with more time."

Environmental Hazards. Three projects involving environmental hazards or irritants occurred at DePaul University. Two undergraduates noticed that many students slipped on a tile floor at the student union on rainy days. To study this problem, they began charting "slipping episodes" for 15 minutes each day that it rained. During an eight day baseline phase, they found that undergraduates slipped an average of 4.4 times. After reporting these data to the director of the student union on two separate occasions, a rug was finally placed on the tile floor.

Two other undergraduates decided to investigate whether fire extinguishers were properly charged in a student dorm. Over a 4 week baseline period, they found that an average of 3.3 fire extinguishers were not charged (data were based on a dial reading on the top of the extinguishers). When this information was presented to the housing director, the defective fire ex-
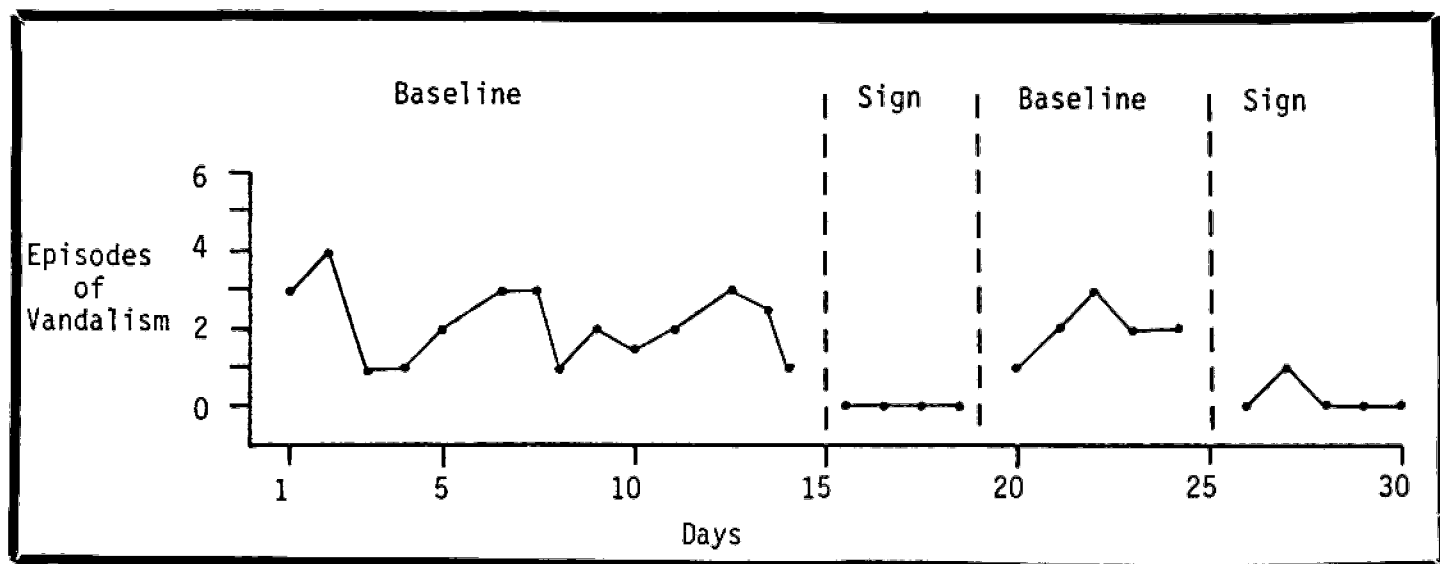

Figure 1. Episodes of vandalism over time.

tinguishers were immediately charged. When initially presented with the data, the housing director asked why psychology students would be going around checking fire extinguishers. The undergraduates replied that "psychologists don't always work one to one with people. Sometimes they will try to solve larger problems within the community."

Another undergraduate felt that limited parking space was a serious problem at DePaul University. The parking shortage was aggravated by the fact that many cars within university parking lots did not have student, staff or faculty stickers. To assess this situation, for three days a week between 11:30 and 12:00, an undergraduate counted the number of nonstickered cars in three rows of one parking lot. During a one - month baseline period, there were an average of 12 nonstickered cars and none had been sued parking tickets. These data were presented to the officer in charge of security, on two separate occasions, but no changes were noted. Fortuitously, a university committee had recently formed to analyze campus security. A student representative from this committee was presented with the accumulated data on the parking space problem. The representative presented the graphs to the committee and described the efforts which had been made to influence DePaul's security force. The committee appreciated this documentation regarding the overall lack of concern toward the enforcement of the parking sticker program. After giving input to this committee, the chief of security was observed dispensing tickets to cars without university parking stickers.

Two other student projects also focused on transportation related problems; one involved excessive noise emanating from elevated trains, the other involved unrepaired potholes on city streets. The first project involved charting noise levels with an odometer throughout the elevated train system in Chicago. The decibel levels frequently were well above harmful levels (i.e., 90 decibels). In an attempt to better document this problem, this undergraduate successfully obtained computer automated equipment from the Environmental Protection Agency, wrote a grant to fund a formal investigation, and contacted over 30 community groups in Chicago to enlist their support for an investigation examining prospective hearing loss among commuters. With the help of a volunteer audiologist, the undergraduate is in the process of documenting noise levels throughout the elevated train system and the extent of hearing loss based on the amount of time citizens have used the elevated trains. In the final paper, the undergraduate wrote the following comments: "This study should bring to the public eye and *ear* the fact that not all pollution is visible. This invisible pollution exists and affects the physical and psychological aspects of each urban dweller."

Another student was angry over damage to his car's tires (i.e., two lost hubcaps, one flat tire) because of numerous potholes in a stretch of road where he regularly commuted. His community project involved counting potholes, which were defined as being visible when traveling ten miles per hour. In a carefully specified section of roadway, an average of 42 potholes were monitored over a several weeks baseline period. This information was reported to a state official whose jurisdiction included road repair on highways. Within two days, all the potholes which had been previously monitored were repaired.

Litter Pollution. The first project involved trays which were left unreturned, that is, not placed in racks, at the DePaul University cafeteria. During a fourteen day baseline period, the average number of trays left unreturned in a designated section of the cafeteria was 35. A prominent orange poster was then posted in the cafeteria with the following words on it: "Please remove trays after completing your meal. Yesterday ———— trays were left. Thank you." Over a few days, the number of

unreturned trays decreased to 26. With a return to the baseline condition, the number of unreturned trays increased to an average of 45.

Another project concerned discarded cigarette butts which were damaging a beautiful hardwood floor in a bookstore. The dependent variable for this investigation was the number of cigarette butts which were swept up at the end of each day. An average of thirteen cigarette butts were found each day during the baseline phase. The intervention consisted of placing four standing ashtrays at different locations throughout the bookstore. In addition, at the front entrance of the store, a standing sign was placed by the ash tray which stated: "Kindly put your cigarettes out here instead of on the floor. Thank you for your help in keeping our store clean." The intervention was extremely effective, as indicated in Figure 2. With the withdrawal of the intervention, the number of cigarette butts on the floor increased. However, re - introduction of the intervention reduced the cigarette butt problem once again. In the final paper, the undergarduate wrote:

I got a good reaction from the people that I work with and even the regional manager. I am going to try to get the company to have specialized signs made and ashtrays for some of the other bookstores in our chain in the area. If I could convince the company to put up the signs and ashtrays when a new store opens, primary prevention may enter in so that the floors never get burn marks on them.

Another undergraduate attempted to reduce litter on the block where he lived. After gathering data for several weeks, he approached his neighbors, showed them the graph depicting daily litter counts, and requested their cooperation in a community anti - litter project. In addition, he posted two signs on the block which said: "Please help keep the neighborhood clean by disposing of waste properly." When this intervention was mounted, the daily litter count decreased from an average of 43 to 9.

Concern that many garbage cans in her apartment complex were not being emptied daily (the tenant's lease stipulated that garbage cans were to be emptied daily) influenced another undergraduate. For three weeks she assessed whether or not each of the nine garbage cans in her apartment complex were emptied. Over this period of time, an average of only 6.6 were emptied each day. At this point she presented these data to her landlord and wrote a letter to all the tenants asking them to actively and vocally bring their grievance concerning waste disposal to the attention of the management. During the next three weeks, an average of 8.2 cans were emptied each day. In her final paper, she wrote the following: "My intervention of bringing the problem out in the open seemed to be very effective in bringing about change. In addition, it seems to have brought all the neighbors closer together to discuss other maintenance problems."

In a gang plagued area of Chicago, one undergraduate counted episodes of spray - painting (defined as either a gang slogan, a member's name, or other graffiti), on private and public buildings in a four block area. Over a four week period, there were an average of 177.2 episodes of spray - painting. These data were then shared with the program director of a neighborhood settlement house. The director felt that this type of data might be useful in documenting the need for interventions which mobilize youth in either more prosocial activities or anti - litter campaigns. The undergraduate was, in fact, offered a job at the agency to work on several community oriented projects. In the final paper, the undergraduate wrote the following:
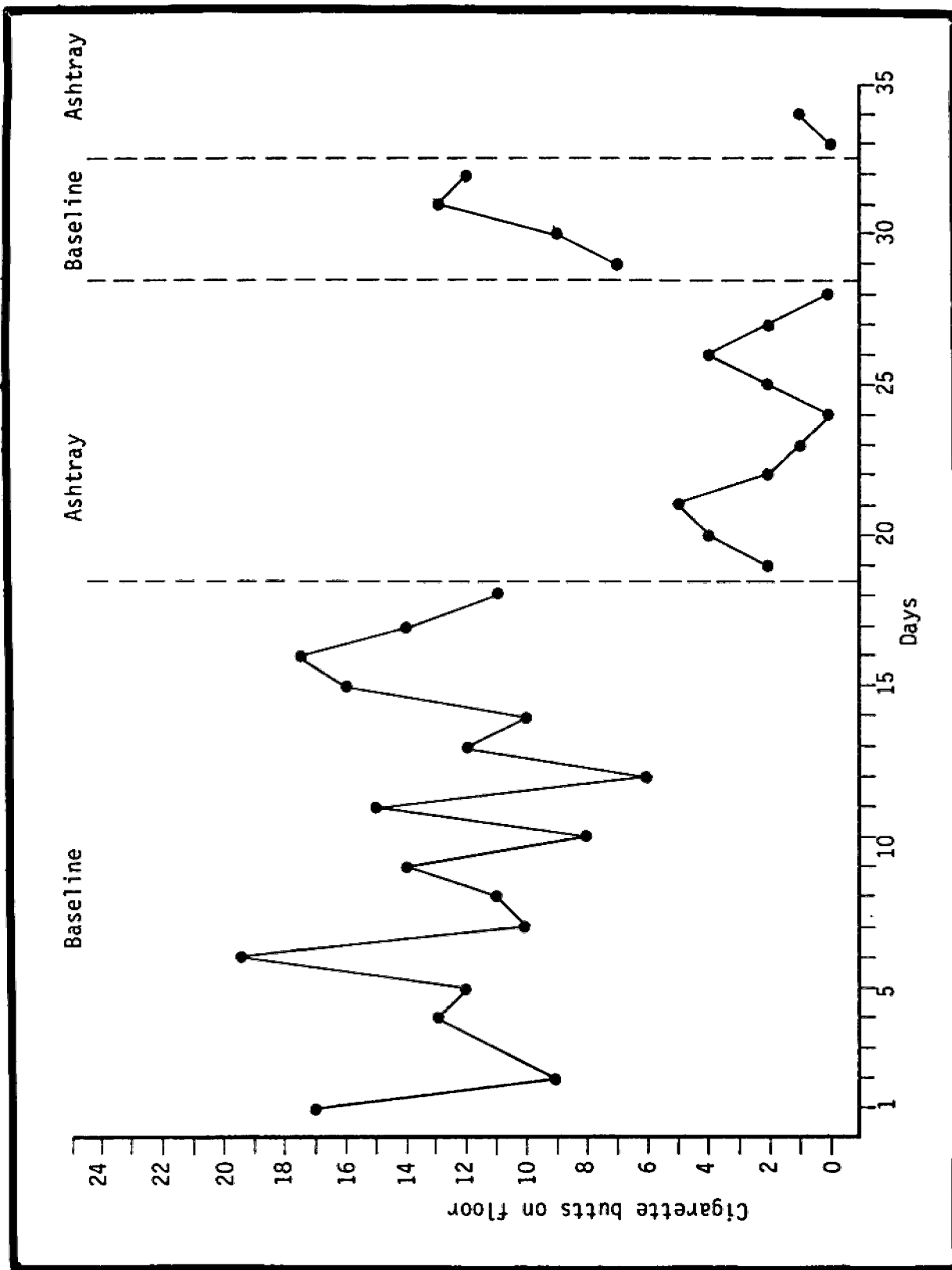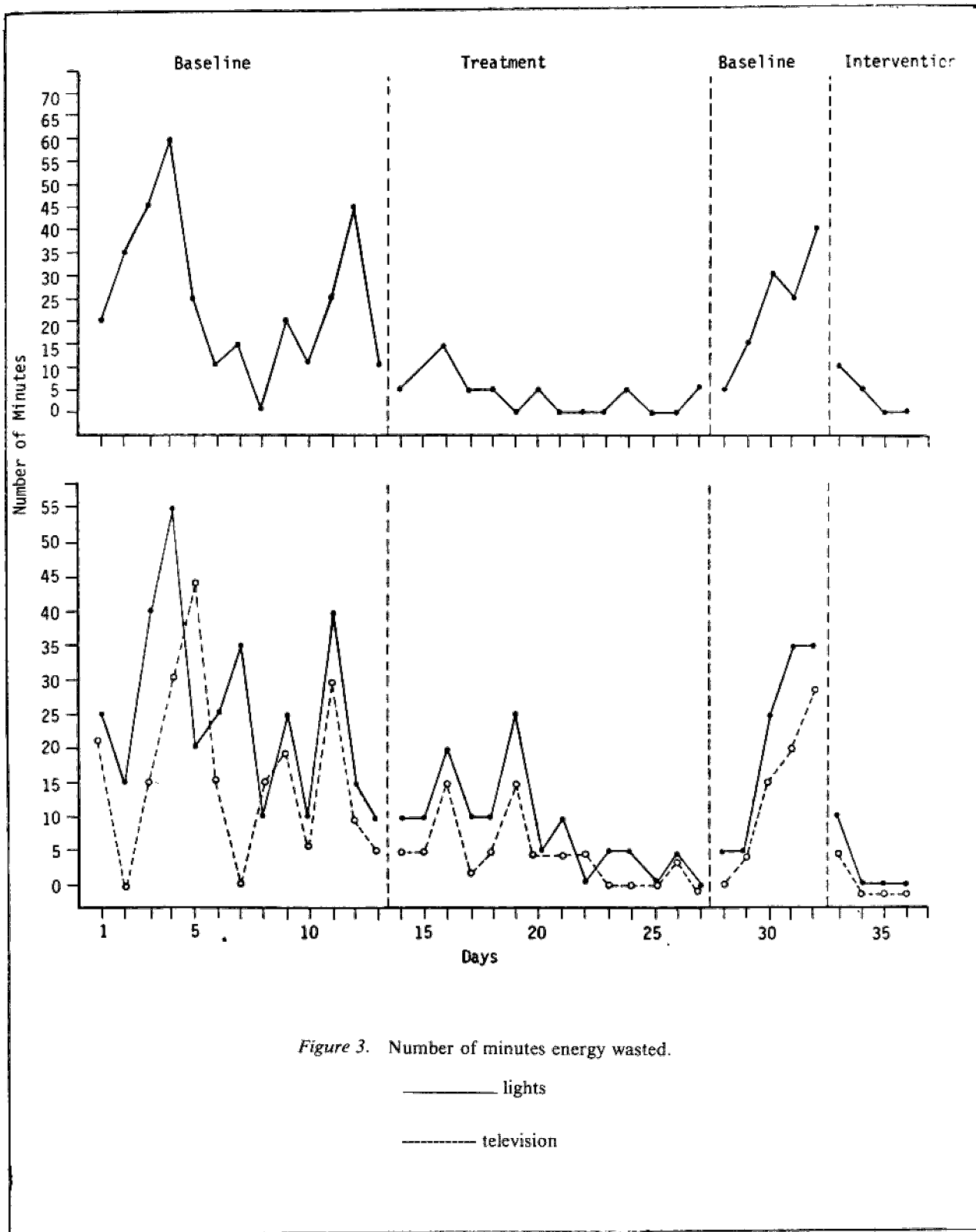
Figure 2. Cigarette butts on the floor across experimental conditions.

Figure 3. Number of minutes energy wasted.

———— lights

- - - - - - television

We agreed to keep in contact for the purpose of developing an appropriate intervention not only for this issue, but others as well. This community project exhibits evidence, not only of the need for active research but also for psychologists to extricate themselves from their traditional role (i.e., office bound) and to broaden their perspective, to devise strategies that encompass the entire spectrum of issues facing their clients, the community and society (i.e, housing, nutrition, unemployment, drugs, etc.).

Energy. Four students selected energy related projects for their community interventions. One undergraduate decided to monitor the temperature in the student cafeteria, which was required to be under 60° by federal regulations. During a baseline phase, the temperature was consistently found to be 5-15° above 65°. When the physical plant director was shown this data, he indicated that the thermostat was set at 65°, however, heat from people's bodies and sunlight resulted in elevated variations in the cafeteria temperature. After this explanation was offered, the undergraduate decided there was no need for a formal intervention to reduce the cafeteria temperature.

Two undergraduates decided to chart energy waste which occurred in their parents' homes. From 7:00 to 9:00 p.m. each evening, one student charted the amount of time lights were on in unattended rooms; the other charted the number of minutes the lights and television were on in unoccupied rooms. Figure 3 presents data from these two projects. After collecting baseline data, the undergraduates posted a feedback sign on their refrigerators which said: "Yesterday the lights were left on for ——— minutes (and the television was on ——— minutes.)" As Figure 3 indicates, this intervention was extremely effective in each house.

The final energy project involved counting the number of empty classrooms which had lights on. Twenty classrooms were monitored three days each week, from 2:15 to 2:30 p.m. During the baseline period, an average of 5.8 empty classrooms had lights on. The intervention consisted of posting large 8 x 10 inch signs adjacent to the light switches in each classroom. Inscribed on the signs were the following words: "Please don't forget to turn off lights! *Especially* when there is no class being held in this room next period. Thank you." With onset of this intervention, the average number of classrooms with lights on was reduced to 1.6.

Discussion

Paraprofessionals are increasingly being utilized in numerous mental health settings. Since the initial accounts of the employment of college students in mental institutions (Holzberg, Whiting, and Lowry, 1964), considerable evidence has accumulated indicating that paraprofessionals are effective in bringing about positive therapeutic change. Recent articles have highlighted critical issues in training paraprofessional undergraduates (Creek & Thompson, 1977; Hess, Harrison, Fink, Lilliston, Aponte, & Korn, 1978: Jason & Carter, 1978; Jason & Smith, in press; Shiverick, 1977). Unfortunately, the overwhelming focus of most paraprofessional training programs has been on bringing about therapeutic change at the individual or group levels. While there is a clear need to train paraprofessionals to assume therapeutic responsibilities traditionally assigned to mental health professionals, it might also be profitable to acquaint and familiarize trainees with a community orientation. A unique feature of the training program described herein was the explicit commitment to not only expose undergraduates to traditional behavior therapy,

self - control interventions, but also to community projects which dealt with such diverse topics as vandalism, environmental hazards, pollution, and energy waste. In other words, the undergraduates were provided a conceptual schema, practical experiences, and requisite skills which hopefully broadened the scope of prospective viable interventions the paraprofessionals might implement during their internships at mental health facilities.

Participation in the self - control projects aided the undergraduates in operationalizing problems and in exploring the effectiveness of disparate behavioral interventions. By precisely specifying topographical features of target behaviors, as opposed to ambiguously stating problems in global terms, the undergraduates were provided daily data to better understand the nature of the experienced difficulty and to establish baseline standards for evaluating the efficacy of behavioral interventions. Feedback which accrued from this monitoring process contributed to one undergraduate's recognizing that the target behavior was within adequate levels and therefore change efforts were unnecessary. Two other undergraduates solely employed self - monitoring as the active ingredient in successfully bringing about behavioral change. The other undergraduates used a wide variety of behavioral techniques, including: positive and negative reinforcement, contingency contracts, stimulus control, positive self - statements, and covert sensitization. In general, the self - control projects provided the undergraduates a concrete experience which enabled them to sharpen their skills at operationally defining target behaviors, monitoring designated behaviors over time, and implementing behavioral self - control interventions.

When the students were somewhat confident of these behavioral assessment skills, they all began conceptualizing a behavioral community intervention. In devising their second project, the undergraduates selected a diverse group of individuals to negotiate with, including the police captain in a suburb; a director fo a settlement house; managers of a bookstore and a stationary department; a cafeteria manager; an apartment manager; a state transportation official; and at DePaul University, the directors of security, housing, the physical plant, the cafeteria, and the student center. The undergraduates were somewhat surprised to learn that they had relatively unimpeded access to these high status individuals — and that the data was generally responded to in a favorable manner. While most undergraduates initially felt that most institutions were impervious to suggestions emanating from unempowered undergraduates, the students found that gatekeepers in at least some community institutions were unusually receptive to data - based input concerning the efficiency or effectiveness of their system's operations.

Data from the community projects was instrumental in reducing vandalism in a parking lot and a department store, insuring that a rug was placed on a slippery floor, charging fire extinguishers, repairing potholes, reducing cigarette butts on a floor, lowering levels of pollution on a block, prompting individuals to return trays to racks, insuring that garbage cans were emptied, having lights turned off in empty classrooms, and conserving energy in homes. The undergraduates also realized that feeding information back to agencies was not a panacea, as some community problems required more long - term, complex interventions (i.e., noise generated by the elevated trains, vandalism in a suburban community, spray paint on buildings). Acquainting students with community problems which were at least partially solvable, as well as more refactory problems, hopefully prepared the undergraduates for understanding the dynamics involved in effecting change within communities.

Student reactions to the training experience in behavior therapy and behavioral community psychology were overwhelmingly positive. The theoretical and conceptual ideas, in combination with the practical experiences in designing and implementing a self - control and community project, were highly valued and appreciated by the undergraduates. In part, this was corroborated by an anonymously filled - out five - point rating scale which tapped the student's level of interest in the subject area (a rating of 1 indicated a very low level of interest; 5, indicated the highest level of interest) at course end. The average rating among the students was 4.3 (range 3-5). One student summed up her experiences in the following way: "The use of projects was a great way to get each student to think for him/her self and to give them a chance to see what is involved in such a project." More than likely, the course's positive evaluation was considerably aided by a focus on providing concrete, real - life skills to attack current, personal and environmental problems.

In summary, the present study provided university undergraduates a unique opportunity to implement personal self - control projects and community - oriented interventions. Conceivably, these experiences will enable the undergraduates to engage in data oriented clinical and community work during their upcoming year - long internship in a mental health facility. Moreover, providing para - professionals exposure to both traditional clinical, preventive, and environmental interventions might enable them to be more responsive to unmet mental health needs, flexible in utilizing an expanded reservoir of intervention alternatives, and capable of solving formerly intractable clinical and environmental problems. Hopefully, paraprofessional training programs will begin to invest more time in the somewhat neglected areas of preventive and environmental interventions.

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Notes

[1]One undergraduate had not turned in her self - control and community paper by the time this study was written.

[2]Over 80% reliability was achieved for each of the different community projects.