

**ATTITUDE CHANGE IN PARAPROFESSIONALS  
AS A RESULT OF TRAINING**

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**JANET DENISE HARLOW**



ATTITUDE CHANGE IN PARAPROFESSIONALS  
AS A RESULT OF TRAINING

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An Abstract  
Presented to  
the Graduate Council of  
Austin Peay State University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

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by  
Janet Denise Harlow  
June 1977

## ABSTRACT

The majority of the research concerning the effects of paraprofessional training has focused on the effect of this training on the helpee. Little research has been conducted to examine the effects of this training on the paraprofessional himself. Therefore it was the purpose of the present study to examine the effects of paraprofessional training on the trainee. Specifically, the present study was concerned with detecting changes in personal attitudes on the part of the paraprofessional trainee which resulted from training.

The sample for the present study was composed of 56 students enrolled in the Human Interaction and Social Psychology classes at Austin Peay State University, Clarksville, Tennessee, during the Spring and Fall quarters of 1976 and the Winter quarter of 1977. The subjects, 30 males and 24 females ranged in age from 18 to 58, with an average age of 24.6.

All subjects were administered the Edward's Personal Preference Schedule (EPPS) and the Guilford-Zimmerman Temperament Survey (GZTS) as a pre- and post-test in order to investigate any changes which might occur as a result of the training. Subjects in the Human Interaction class served as paraprofessional trainees for the experimental group and received human relations training similar to

paraprofessional training. Subjects in the Social Psychology class served as the control group.

The difference in the pre- and post-test scores was computed for each subject on all scales of the EPPS and GZTS, and the data was analyzed by means of the analysis of variance. Statistically significant differences between the experimental and control groups at the .05 level were found on two scales of the EPPS and one scale of the GZTS. The experimental group showed significant gain on Achievement (Total and Spring group on the EPPS), Nurturance (Winter group on the EPPS), and Emotional Stability (Spring group on the GZTS), compared to the gains of the control group.

A review of the literature reveals that little research has been done in the area of attitude change on the part of paraprofessional trainees as a result of training. In light of the scarcity of research in this area and in spite of the paucity of significant results in the present study, it would seem most appropriate that further research be conducted in the area of attitude change on the part of paraprofessional trainees as a result of training.



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A Thesis  
Presented to  
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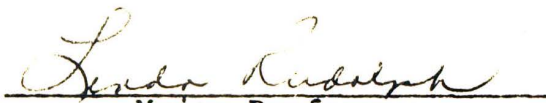
In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

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by  
Janet Denise Harlow  
June 1977

To the Graduate Council:

I am submitting herewith a Thesis written by Janet Denise Harlow entitled "Attitude Change in Paraprofessionals as a Result of Training." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

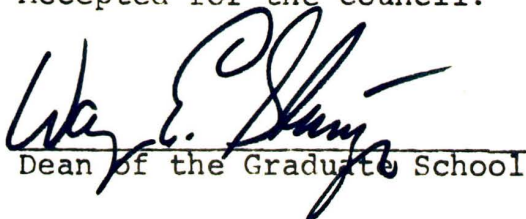
  
Major Professor

We have read this thesis and  
recommend its acceptance:

  
Second Committee Member

  
Third Committee Member

Accepted for the Council:

  
Dean of the Graduate School



## ACKNOWLEDGEMENTS

The author wishes to express her sincere gratitude to her major advisor, Dr. Linda Rudolph, Assistant Professor of Psychology, Austin Peay State University, for inspiring and encouraging her during the extended course of this study. Sincere gratitude is also extended to Dr. John D. Martin and Dr. Elizabeth H. Stokes for their assistance during the final stages of refining the thesis manuscript.

The author also wishes to thank her parents and her friend, Lee Silvia, for tolerance and willing assistance during the two-year course of this study. A special thanks goes to a special friend for her encouragement and insistance that the author stand on her own two feet.

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## Chapter I

### INTRODUCTION

In recent years a new concept has emerged in the area of human services. The role of the professional in human services is now being augmented by the new role of paraprofessionals. This new concept has recently received much attention in the literature with regard to the necessity (Holzberg, 1963; Gartner and Riessman, 1974), the utilization (Varenhorst, 1974; Allen, 1974; Greenblatt and Kantor, 1962), the training (Danish and Brock, 1974; True and Young, 1974), and the effectiveness of the paraprofessional (Brown, 1974; Brown, 1965; Zunker and Brown, 1966; Carkhuff and Truax, 1965 Carkhuff, 1968). However, little attention has been given to the effects of paraprofessional training upon the trainee. Knopf (1974) proposed that the paraprofessional not only experiences professional growth as a result of training but also experiences personal growth. This proposal has been investigated by Phelps, Peer, and Canada (1973); Wehmer, Cooke, and Gruber (1974); and Pullen (1972). Inasmuch as there is evidence to support the hypothesis that the paraprofessional also receives personal benefits from his professional training, it is the purpose of the present

study to investigate the effect of this training on the paraprofessional's personal attitudes.

## Review of the Literature

### Necessity

The necessity of the paraprofessional or subprofessional role, as it has been referred to in the past, has been a recognized fact for several years. Holzberg (1963) saw the subprofessional as a means of implementing the objectives of the Joint Commission on Mental Illness and Health (Ewalt, 1961). Holzberg indicated that these objectives, which would necessitate a significant increase in manpower, could be reached not only by the increased utilization of professionals but also by the increased utilization of paraprofessionals. This necessity of using the paraprofessional to meet the manpower needs created by the objectives of the Joint Commission on Mental Illness and Health was also indicated by Greenblatt and Kantor (1962).

However, the necessity of the paraprofessional is not always viewed in terms of basically fulfilling a manpower shortage. Gartner and Riessman (1974) listed what they felt were five major reasons instrumental in the development of the paraprofessional movement. These were as follows:

- 1) Consumers, particularly the poor and minorities, were troubled by the inadequacies of traditional service delivery and by the reluctance of professionals to understand their needs -- both physical and psychological.

- 2) There was a recognition that the poor were locked out of achieving professional status by traditional



credentialing paths, which required long periods of education prior to job placement.

3) Professionals, who at first felt highly criticized by the poor and minority communities and were reluctant to accept paraprofessionals, soon accepted them gladly as a buffer. The paraprofessional was sometimes called a bridge to the poor or minority consumer who was highly critical of teachers, social workers, and other human service professionals.

4) There was a need for jobs, and the traditional private sector was not providing them. Consequently, the idea that people possessing a community understanding and background could begin working with very minimal training was a positive aspect of the paraprofessional movement and was used to generate needed jobs.

5) In some cases, particularly in terms of service delivery in poor neighborhoods, there was a shortage in human power that paraprofessionals could fill (pp. 253-4).

Pearl (1974) pointed out four reasons for the utilization of paraprofessionals which could be viewed as less than noble aspects of the necessity of this role. First, Pearl indicated that the paraprofessional is on many occasions viewed as a form of cheap labor, not only in terms of his wages, but also because he could be easily removed from the organization by reason of his lack of professional associations and lack of control or input in the licensing procedures. Secondly, the paraprofessional role is sometimes viewed as a way of cosmetically altering the organization of which it is a part. By the employment of minorities in paraprofessional positions, organizations have a means of complying with both state and federal regulations without altering the basic structure and policies of that organization. Thirdly, paraprofessionals

sometimes serve as "agents of 'technical' progress." This role is based on the idea that "through carefully designed functional task analyses, activities that do not require the refined and expensive talents of the precious professional could be delegated, at no loss in quality of service, to lesser-trained paraprofessionals" (p. 265).

The final reason for the utilization of the paraprofessional, who is either a leader of the community who has been "coopted" into representing an organization which he does not completely support, or a minority member, may serve to pacify the community's disenchantment with the inadequate or irrelevant services offered by this organization.

### Utilization

For whatever the reason, the paraprofessional has been called upon to provide a variety of services in a variety of settings. Typically, one thinks of a paraprofessional as someone of college age or older. Varenhorst (1974), however, discussed a program utilizing adolescents as peer counselors in the Palo Alto School District. In that program, which she co-directs with Beatrix Hamburg, Varenhorst stated that the peer counselors are used to fill roles which the available professionals can not, such as being friendly with students who need friends, or helping the students in need of friends learn the skills necessary to develop their own group of friends. The peer counselors for this project were volunteers from both the junior and senior high schools in Palo Alto. After training they



received task assignments as peer counselors upon the written request of a teacher or counselor in the district. The peer counselors were presented with a wide variety of assignments and activities. One high school student working with the school psychologist applied behavior modification techniques in aiding an elementary level child to learn appropriate social behavior and to accept adult direction. Two high school girls were given the assignment of playing games with handicapped students their own age to give these handicapped students an opportunity for social contact. Also, several students were trained to conduct structured interviews for the purpose of collecting information for a study from their peers.

As stated before, typically the term "paraprofessional" brings to mind the image of an individual of college age or older. The image is explained in part by the abundance of literature concerning the use of college students as paraprofessionals. Allen (1974) described the program at the University of South Florida (USF) at Tampa, which utilizes paraprofessionals recruited from its student body in a wide range of programs. The students work in six programs directly associated with the USF counseling center, both as paid paraprofessionals and as volunteers. Their jobs consist primarily of "(a) Rap Cadre Staff (for drug and crisis intervention), (b) behavior modification managers, (c) center assistants, (d) black peer managers, (e) career managers, and (f) veterans affairs managers" (p. 277).

There are two additional paraprofessional programs at USF which are not as directly associated with the counseling center -- the helpline operators and residence hall staff.

As can be seen from the list of programs at USF presented by Allen, college students have been used extensively as paraprofessionals. However, Allen has shown the use of the college student only as a paraprofessional limited to the college campus.

Greenblatt and Kantor (1962) reported the use of college students as paraprofessionals outside of the university setting at Metropolitan State Hospital in Waltham, Massachusetts. The students in that program were volunteers from nine Boston area colleges and universities. These students, who made a commitment at the beginning of an academic year to work for that year, were assigned to either ward work or the case aid program at Metropolitan State Hospital. Greenblatt and Kantor described ward work and the case aid program in the following manner:

Ward work aims at decreasing patient apathy and isolation and increasing social interaction. It consists of fostering recreational, occupational and social activities, including games, sports, gardening; taking patients out of doors or on shopping trips; helping them to upgrade the physical and social environment in which they live; improving self-care and personal appearance, and participating meaningfully in small activity or "club" groups.

The case aid program ... involves 8 to 10 students per case aid unit, each student assigned to a given patient for the whole academic year. The goal is to make a relationship with that patient, to introduce him systematically to essentially non-patient activities through planned excursions off the ward

and into the community, to help him achieve a better adjustment within the hospital, or to catalyze discharge and community resettlement (p. 810).

In addition to the college campus and mental hospital, the paraprofessional is also utilized in the community mental health agency. Nicoletti and Flater-Benz (1974) indicated that volunteers at the Jefferson County Mental Health Center outside of Denver, Colorado, are utilized in both direct service and indirect service and community outreach. In the area of direct service, the paraprofessionals served in both group and individual treatment programs. Their experiences were with family-adolescent groups, aiding in teaching parents and adolescents effective ways of contracting; with anxiety management groups, training individuals in the use of deep muscle relaxation; with the alcoholic group, conducting group therapy, overseeing the taking of Antabuse, and following up patients; with the day therapy group, working with women "who are experiencing situational depression, isolation, and difficulties in social or marital relationships" (p. 282); and finally with the "Relax and Grow Thin" group, which uses a behaviorist approach to dieting and relaxation techniques to cope with the anxieties associated with over-eating.

The paraprofessionals at that center provided direct services by participating in individual treatment partly through the "Ways to Effective Living" program in which



they maintained close contact with chronic patients through home visits and also by initiating activity-oriented treatment programs.

These same paraprofessionals provided indirect service by consultation and participation in community growth programs. Also, they were involved in public relations efforts for the mental health center, both in providing for the dissemination of information concerning mental health and in the recruitment of new volunteers.

Another area in which the paraprofessional is often utilized, which may have connections with public and/or private schools, colleges and universities, and mental health centers, is drug education. Rudow (1974) described a program in this area which was developed to serve Colorado State University and the citizenry of Fort Collins, Colorado. In that program, the paraprofessional staff was utilized in distributing information concerning drugs in a variety of methods. They manned an information hot-line, which also served as a means of crisis intervention; served as resource personnel for the drug education programs in the local school system; developed rap groups which met on a regular basis in the schools; gave speeches and led discussions for local civic, service, or fraternal organizations in the community; and conducted training sessions for employees of local industries.

In addition to the dissemination of information concerning drugs, the paraprofessionals described by Rudow

were responsible for developing "alternative behavior programs" such as "...arts and crafts programs for underprivileged youth, in conjunction with the welfare department; camping trips to the mountains for youngsters; the Rent-a-Kid Program, an employment service for junior and senior high school students; yoga and transcendental meditation classes; and informal rap sessions with young people" (p. 296).

In addition to mental health work, another area of human services in which the paraprofessional has been utilized is that of employment work. Most paraprofessionals in this field can be found serving in such programs as Neighborhood Youth Corps, Operation Mainstream, Concentrated Employment Programs, and Work Incentive Programs. Gordon (1974) reported that those paraprofessionals who serve in Youth Opportunity Centers are utilized as a means of "outreach to recruit new clients and follow up after client placement in some kind of work training" (p. 292). Also, they could be found conducting group orientation, individual counseling in areas other than vocational, and most often providing crisis intervention. Gordon further indicated that the function the individual paraprofessional served depended totally on the particular center in which he worked.

As can be seen by the previous examples, the paraprofessional has been used to provide a variety of services in a variety of settings; and there appear to be

few limitations on their future utilization in new and more divergent areas. DeMoss (1974) has suggested that the paraprofessional might be utilized as an administrator in human services centers, thereby releasing the professionals, who often fill this role, for duties and activities more aligned to their training.

### Training

As there are many ways in which the paraprofessional is utilized, there are also many different training programs for paraprofessionals based upon their expected utilization. For example, the paraprofessionals conducting the anxiety management and "Relax and Grow Thin" groups described by Nicoletti and Flater-Benz (1974) require instruction in deep muscle relaxation as part of their training, whereas the paraprofessionals described by Rudow (1974) require training which will give them a sound knowledge of drug use and abuse.

Although each paraprofessional training program may have features that are peculiar to that program, Danish and Brock (1974) contended that each program must begin by teaching a basic set of relationship-building skills. They further stated that there are presently four programs that attempt to meet this training necessity and that each is well suited for use with paraprofessionals. The training programs they described are those developed by Carkhuff (1969), Danish and Hauer (1973), Ivey (1971), and Kagan



(1972). Danish and Brock further stated that these programs are alike in that the process each uses to teach content is guided by theoretical rationale and not the whim of the trainer. Also, all of the programs utilize the integrated didactic-experiential format of Truax and Carkhuff (1967).

In discussing each program, Danish and Brock indicated that Carkhuff's program consists of teaching the trainee to make facilitative responses which meet the "necessary and sufficient conditions" of empathy, unconditional positive regard, and genuineness proposed by Rogers (1957). Ivey's program attempted to define "verbal behaviors in terms of specific response categories and added the dimension of nonverbal attending behavior to the list of essential skills" (p. 300). These skills are taught by means of a microcounseling training model, which utilizes the video-taping of brief counseling segments to be reviewed jointly by the trainer and trainee. Kagan's program is characterized by the use of the videotape feedback model, not only to teach specific skills, but primarily to allow the trainee the opportunity to recognize the impact the helper and helpee have on each other and thereby more fully comprehend the interaction between the two. Finally, the Danish and Hauer program is described as a skills learning program wherein the trainee progresses through a series of six essential skills which include three components involved in being a helper: (a) an understanding of oneself, (b) some knowledge of helping skills, and (c) experience in applying

these skills. The six skills delineated were: (a) understanding your need to be a helper, (b) using effective nonverbal behavior, (c) using effective verbal behavior, (d) using effective self-involving behavior, (e) understanding other's communication, and (f) establishing helping relationships.

Although most training programs for paraprofessionals are directly connected with a specific service program, True and Young (1974) report that it is now possible to obtain an associate degree with mental health or human services focus from at least 174 colleges. These programs typically consist of courses which include "(a) an introduction to the mental health/human services (MH/HS) area; (b) an overview of helping approaches; and (c) specific skills training in interviewing, the observation and recording of behavior, individual counseling, group dynamics, activity therapy, and behavior modification" (p. 305). The programs also contain additional courses which are relevant to MH/HS and are already available at the college. Course work in these programs are supplemented by substantial practicum experience for the trainees in local helping agencies. Some programs also offer the opportunity for full time practicum experience during the summer term. Even though the graduates of these MH/HS associate degree programs are termed as paraprofessionals, the trend on the part of the graduates themselves is to view themselves as new, beginning level professionals.

In summary, in spite of the fact that the overall training of the paraprofessional may vary from program to program, there is a similarity in that they all include some form of training in basic relationship building skills.

### Evaluation of Effectiveness

The literature contains numerous articles which purport to evaluate the effectiveness of paraprofessionals in terms of the improvement of their clients. Brown (1974) indicated, however, that the vast majority of the studies reported in the literature evaluating different paraprofessional programs are subject to numerous errors in design which tend to make their conclusions questionable. He indicated that there are some studies which, although they contain some design errors, are basically sound enough that the validity of the conclusions presented in these studies could be seen as acceptable.

Brown (1965) presented his own study as being sound in regard to design and felt that the conclusions presented could be considered as valid. In his study, six paraprofessionals, three males and three females, who had received 40 hours of intensive training, were randomly assigned to same-sex counselee groups for the purpose of providing academic adjustment counseling. These groups were composed of 216 entering college freshmen who were matched with a control of an additional 216 entering freshmen at the same institution on the basis of age, sex, measured scholastic



ability, measured study orientation, and high school academic achievement. A comparison was made of the counseled freshmen and the non-counseled freshmen on the basis of study skills and academic attitudes. It was found that the counseled freshmen exhibited gains significantly greater in their scores on tests of the above mentioned factors than did those freshmen who did not receive counseling. In addition, the counseled freshmen obtained grades averaging half a letter grade and 8.3 quality points higher than the non-counseled freshmen during the first semester.

In a similar study, Zunker and Brown (1966) compared the effectiveness of eight paraprofessionals, four male and four female, with four professional counselors, two male and two female, all of whom had received identical training and would use identical materials and sequence of counseling activities during the study. The professional counselors provided six-and-one-half hours of academic-adjustment guidance to 160 entering freshmen of the same sex. From the remaining entering freshmen, who were exposed to equivalent counseling by the paraprofessionals, a sample of 160 subjects was drawn which was matched to the group seen by the professionals on the same factors controlled for in Brown's 1965 study cited above. Comparison of the two groups of counselors, professional vs. paraprofessional, was made on the basis of test, questionnaire, and scholarship data of their counselees. It was determined that the

paraprofessional counselors were "as effective as the professional counselors on all criteria of counseling effectiveness. Furthermore, freshmen counseled by student counselors made significantly greater use of the information received during counseling, as reflected by first semester grades and residual study problems" (p. 738).

Carkhuff and Truax (1965) reported on the effectiveness of the paraprofessional in a mental hospital setting. In their study, 150 hospitalized mental patients were divided into groups according to the number of years they had been institutionalized. These groups were then randomly assigned to the control or experimental condition. Those in experimental groups participated in group sessions conducted by lay hospital personnel who had volunteered to participate in the study and had received training based upon Carkhuff's model (1969), while the control group received no treatment or special attention. Comparison of the control and experimental subjects was made on the basis of hospital discharge rates and pre- and post-treatment ratings of ward behavior by the nurses and ward attendants of the wards from which each patient came. Carkhuff and Truax indicated that although there was no significant difference in the discharge rates of the two groups of patients, there was a significant improvement in ward behavior among those patients in the experimental group as compared to the control group. From these results, Carkhuff and Truax concluded that "a specific but relatively brief training

program, devoid of specific training in psychopathology, personality dynamics, or psychotherapy theory can produce relatively effective lay mental health counselors" (p. 430).

Carkhuff (1968) has summarized the findings concerning the effectiveness of paraprofessionals, reiterating that in some cases it has been shown that the paraprofessional is effective in producing positive movement on the part of his client, and when compared to professionals can be as effective if not more so in producing positive movement.

### Effects of Training

Although the literature contains research examining the paraprofessional's effect on others, little attention has been given to the effects of this training on the trainee. Wehmer, Cooke, and Gruber (1974) sought to examine this effect in a study of 13 persons who volunteered to receive paraprofessional training in treating the alcoholic. Subjects were given pre- and post-tests of the Adjective Checklist, the Alabama Attitude Toward Alcoholism Scale, the Alcoholism Information Scale, and the Attitude Toward Mental Illness Scale. Wehmer et al. stated that no statistically significant changes were found for the personality, information, and attitude measures taken in their study. They indicated, however, that there were definite positive movement trends, but that these failed to register as significant because of the small number of subjects used and the large changes needed to provide significance.



Phelps, Peer, and Canada (1973) also examined changes in paraprofessionals as a result of training. Their study was comprised of a group of 29 employment service interviewers who participated in a 2-year paraprofessional training program teaching basic counseling skills. Using pre- and post-test administrations of the Rokeach Dogmatism Scale and the Porter Test of Counselor Attitudes, they found that the participants in their program exhibited a significant decrease in closed-mindedness as measured by the Rokeach Dogmatism Scale, and changes in types of counselor responses as measured by the Porter Test of Counselor Attitudes. No further information was supplied concerning the changes detected by the Porter Test of Counselor Attitudes.

Finally, Pullen (1972) conducted a study investigating the effectiveness of intensive, in-service training of paraprofessionals in an attempt to determine the effect of this training on certain trainee personal traits. Pullen used pre- and post-test administrations of the Guilford-Zimmerman Temperament Survey and the Sixteen Personality Factor Questionnaire with 60 male and female paraprofessional counselors of various racial and ethnic backgrounds who were employed by the Devereux Foundation for its summer camp program. Half of the subjects were randomly assigned to the experimental group and half to the control group. The experimental group received 2 weeks of intensive, in-service training in methods of residential treatment for emotionally

disturbed youth. A significant difference between the control and experimental groups was found; the experimental group showing a gain in sociability as measured by the Guilford-Zimmerman Temperament Survey, and a gain in relaxation as measured by the Sixteen Personality Factor Questionnaire.

The above cited studies have been directed toward establishing the fact that paraprofessionals undergo a personality change as a result of their training. However, these studies do not lend full support to this proposition. Two of the studies did not utilize a control group to validate their findings (Wehmer et al., 1974; and Phelps et al., 1973). In addition, only one of the studies (Phelps et al., 1973) utilized one of the programs in basic relation-building skills which Danish and Brock (1974) have characterized as being a necessity in the training of paraprofessionals.

Therefore, it was the purpose of the present study to ascertain the effect of paraprofessional training on the trainee, utilizing the basic relationship building skills as recommended by Danish and Brock (1974). Specifically, it was hypothesized that students receiving human relations training similar to that received by many paraprofessional groups would exhibit significant changes in personal attitudes as measured by the Edward's Personal Preference Schedule and Guilford-Zimmerman Temperament Survey. Experimental and control groups were utilized.

## Chapter II

### METHOD

#### Subjects

Subjects for the present study were 56 students enrolled in the Human Interaction and Social Psychology classes at Austin Peay State University, Clarksville, Tennessee, during the Spring and Fall quarters of 1976, and the Winter quarter of 1977. These students had volunteered to participate in return for a small amount of extra credit in the class from which they were solicited. The subjects ranged in age from 18 to 58 with an average age of 24.6. The total group of subjects was comprised of 30 males and 24 females.

Subjects were assigned to either the control or experimental group on the basis of whether they were enrolled in the Human Interaction or Social Psychology class. Those in the Human Interaction class were assigned to the experimental group, thereby serving as the paraprofessional group receiving human relations training. The experimental group consisted of 9 males and 14 females who ranged in age from 18 to 38 with an average age of 24.5.

The subjects who were enrolled in the Social Psychology class were assigned to the control group. The control



participants were 21 males and 12 females who ranged in age from 18 to 58 with an average age of 24.6.

### Instrumentation

The Edward's Personal Preference Schedule (EPPS) and the Guilford-Zimmerman Temperament Survey (GZTS) were selected for use in the present study to determine if a change occurred in personal attitudes as a result of para-professional training. These surveys were selected for use in the present study because of their widespread use in previous research. Buros (1971) lists 1080 studies utilizing the EPPS as a part of their instrumentation, and Buros (1965) lists 173 studies utilizing the GZTS as a part of their research apparatus.

The EPPS is a personality invention which provides 15 scores related to personality variables. These include Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intraception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, and Aggression. More detailed descriptions of the variables which these scales purport to measure can be found in the Edwards Personal Preference Schedule Manual published in 1959.

The manual accompanying the EPPS reported the internal consistency reliability coefficients for an N of 1,509 as ranging from .60 to .87 with a median of .78 for the individual scales. Also, reported were one-week retest

reliability coefficients for an N of 96 ranging from .55 to .87 with a median of .73 for the individual scales.

The GZTS is a personality inventory which yields a total of ten scores, and like the EPPS, these scores are believed indicative of personality traits. These include General Activity, Restraint, Ascendancy, Sociability, Emotional Stability, Objectivity, Friendliness, Thoughtfulness, Personal Relations, and Masculinity. More detailed descriptions of the variables which these scales purport to measure can be found in the Guilford-Zimmerman Temperament Survey Manual published in 1949. The manual accompanying the GZTS reports reliability coefficients for the individual scales ranging from .75 to .87 with a median of .80.

In addition to these personality inventories, standardized direction sheets were used with both the pre- and post-test administrations to insure that all subjects received the same instructions. The direction sheets accompanying the pre-test also served as a means of collecting further information concerning each subject, i.e. age, sex, and academic major. Copies of these sheets can be found in Appendix A.

### Procedure

Subjects for the present study were obtained from the Human Interaction and Social Psychology classes during the first week of classes each quarter that this study was conducted. In obtaining these volunteers, a standardized

statement was used in order that no group would receive more information concerning the study than any of the other groups approached for subjects. This statement can be found in Appendix A.

When volunteers had been secured, they were scheduled for testing at times agreeable both to themselves and the experimenter. Because of this scheduling procedure, subjects were tested both in small groups and singularly. All subjects were tested in closed rooms where there was little disturbance and ample work space.

Testing folders were placed at desks prior to the arrival of the subjects in such a manner so that there would be ample working space for all subjects. Contained in each folder was: (a) a copy of the appropriate directions sheet, pre-test or post-test directions; (b) a copy of the EPPS with an answer sheet inside the front cover; and (c) a copy of the GZTS also with an answer sheet inside the front cover.

When all scheduled subjects had arrived at the testing location, they were instructed to open their folders and following the instructions contained therein to begin work. Subjects who arrived at the testing location after testing had begun were taken to another room for testing.

During the period between the pre- and post-test sessions the experimental group received approximately 30 class hours of human relations training. The format for the presentation of the human relations training included



lecture, group exercises, out of class exercises, and assigned readings. Materials included the text of I'm O.K., You're O.K. (Harris, 1967) and a workbook of related readings and exercises with primary emphasis on building the self concept of the trainee and enabling the trainee to analyze his communications with others. In addition, the Carkhuff and Truax model of basic relationship building skills was presented with emphasis on listening and responding based upon empathy, genuineness, and respect. These relationship building skills and problem solving skills, utilizing the Carkhuff and Glasser models, were developed through lecture, written and group exercises, and role-playing activities both in and out of class.

During this same period of time, the control group was exposed to lectures in social psychology drawn from the material contained in a standard social psychology text. This material was supplemented by outside reading in journals related to social psychology.

The pre-test procedure was followed again during the last week of classes prior to exams for the post-test collection of data. After all subjects had received both pre- and post-test administrations of the testing package, they were debriefed as to the nature and purpose of the study.

### Chapter III

#### RESULTS

It was the purpose of the present study to determine if there was significant changes in personal attitudes on the part of individuals receiving human relations training similar to paraprofessional training as compared to a control group not receiving this same training. To investigate this question, the difference between the pre- and post-test scores on each scale of the Edward's Personal Preference Schedule and the Guilford-Zimmerman Temperament Survey was determined for all subjects. With the resultant data, analysis of variance was computed for each scale comparing the experimental and control groups. In addition to computing analyses of variance comparing all subjects assigned to the experimental group to all subjects assigned to the control group, analyses of variance were computed comparing the experimental and control groups for each quarter that the study was conducted. This analysis by quarter was deemed necessary because of changes in the treatment of the control group for each quarter which were beyond the control of the experimenter. Specifically, the instructor for the Social Psychology class was a different individual each quarter while the present project was in progress.

The F-ratios resulting from the analyses of variance described above are reported in Tables 1 and 2. The computed F-ratios for the majority of the scales of the EPPS proved not to be statistically significant at the .05 level. However, statistical significance was found on two scales of the EPPS: the Achievement scale for the comparison of both the Total and Spring groups, which resulted from an increase on this scale on the part of the experimental group as compared to the decrease on the part of the control group, and the Nurturance scale for the comparison of the Winter groups, which also resulted from an increase on the part of the experimental group as compared to the large decrease on the part of the control group. These results can be seen in Table 1.

As on the EPPS, the computed F-ratios for the majority of the scales of the GZTS proved not to be statistically significant at the .05 level. However, statistically significant difference was found for the comparison of the experimental and control groups on the Emotional Stability scale for the Spring group, which resulted from an increase on this scale on the part of the experimental group as compared to a decrease on the part of the control group. This is shown in Table 2.

Tables 3 and 4 represent the mean changes on each of the scales of the EPPS and the GZTS.



Table 1

F-ratios Resulting from the Analysis of Variance  
on Each of the Scales of the Edward's Personal Preference Schedule

SCALE	Total (N=56)	Spring (N=28)	Fall (N=19)	Winter (N=9)
1. Achievement	4.9813*	7.0694*	3.8713	0.4225
2. Deference	0.6995	0.4078	1.4035	0.4681
3. Order	0.7442	0.0809	0.4621	0.1533
4. Exhibition	0.1443	0.0617	0.1333	3.5063
5. Autonomy	0.0053	0.4368	0.0121	0.4053
6. Affiliation	0.5559	0.7078	0.1038	3.4064
7. Intraception	0.7375	0.0702	1.0167	0.0241
8. Succorance	0.0078	1.7848	2.8292	0.2251
9. Dominance	2.2736	3.0525	0.0094	0.0021
10. Abasement	0.3127	0.3076	0.6572	0.2581
11. Nurturance	0.3506	0.5304	0.5640	6.1846*
12. Change	0.2138	0.5832	0.1011	0.0004
13. Endurance	0.0033	0.1175	0.0074	0.1051
14. Heterosexuality	0.2140	0.0040	0.8559	0.0418
15. Aggression	3.2490	3.0013	0.7488	4.3710

\*p .05

Table 2

F-ratios Resulting from the Analysis of Variance  
on Each of the Scales of the Guilford-Zimmerman Temperament Survey

SCALE	Total (N=56)	Spring (N=28)	Fall (N=19)	Winter (N=9)
1. General Activity	0.9943	0.9438	0.0523	0.2698
2. Restraint	1.8554	0.5943	3.1039	0.0016
3. Ascendance	0.1347	0.0254	0.4666	0.1371
4. Sociability	0.8864	0.0027	0.2425	1.6068
5. Emotional Stability	3.2518	4.8736*	1.6538	0.0070
6. Objectivity	2.4860	3.2232	1.5576	2.2958
7. Friendliness	1.1147	2.7511	0.1255	0.1520
8. Thoughtfulness	0.0001	0.2072	0.4697	1.3106
9. Personal Relations	2.9345	0.7115	1.9774	1.4576
10. Masculinity	0.0182	0.2942	0.2158	3.4064

\*p .05

Table 3

Mean Changes Between Experimental and Control Groups  
on Each of the Scales of the Edward's Personal Preference Schedule

SCALE	Total	Spring	Fall	Winter
1. Achievement				
Experimental	1.1739	2.0909	2.0000	-2.0000
Control	-0.6970	-0.8235	-0.6667	-0.2500
2. Deference				
Experimental	1.0000	1.7272	1.5714	-1.4000
Control	0.2121	0.8824	-0.5833	-0.2500
3. Order				
Experimental	0.0000	0.8181	0.4286	-2.4000
Control	0.9090	1.0588	1.5000	-1.5000
4. Exhibition				
Experimental	-0.7391	-0.8181	0.0000	-1.6000
Control	-0.3939	-0.4706	0.5000	2.7500
5. Autonomy				
Experimental	1.0435	0.3636	0.8571	2.8000
Control	1.1212	1.4118	1.0000	0.2500
6. Affiliation				
Experimental	0.8696	1.7272	0.2857	-0.2000
Control	0.1515	0.5882	0.8333	-3.7500



Table 3 (continued)

SCALE	Total	Spring	Fall	Winter
7. Intraception				
Experimental	-0.7391	-0.6363	-1.0000	-0.6000
Control	0.2121	-0.2353	1.2500	-1.0000
8. Succorance				
Experimental	0.6956	-0.3636	1.8571	1.4000
Control	0.7879	1.5882	-1.0000	2.7500
9. Dominance				
Experimental	-0.7391	-1.6363	0.4286	-0.4000
Control	0.5151	0.7059	0.5833	-0.5000
10. Abasement				
Experimental	-0.6956	-1.6363	-1.2857	2.2000
Control	-1.2727	-0.8235	-2.6667	1.0000
11. Nurturance				
Experimental	-0.6522	-0.3636	-2.2857	1.0000
Control	-1.2424	-0.9412	-0.8333	-3.7500
12. Change				
Experimental	0.0435	0.6363	-1.0000	0.2000
Control	-0.4545	-0.6470	-0.4167	0.2510

Table 3 (continued)

SCALE	Total	Spring	Fall	Winter
13. Endurance				
Experimental	-0.6087	-0.6363	0.4286	-2.0000
Control	-0.6667	-1.1176	0.2500	-1.5000
14. Heterosexuality				
Experimental	0.7391	0.5454	0.1428	2.0000
Control	1.2424	0.6470	2.0000	1.5000
15. Aggression				
Experimental	-0.9565	-2.1818	-0.7143	1.4000
Control	0.7879	-0.2941	1.0833	4.5000

Table 4

Mean Changes Between Experimental and Control Groups  
on Each of the Scales of the Guilford-Zimmerman Temperament Survey

SCALE	Total	Spring	Fall	Winter
1. General Activity				
Experimental	0.9565	1.0000	-0.4286	2.8000
Control	-0.1818	- .5882	0.0000	1.0000
2. Restraint				
Experimental	0.6087	0.2727	1.2857	0.4000
Control	-0.4848	-0.1176	-1.3333	0.5000
3. Ascendance				
Experimental	0.6087	-0.7272	2.2857	1.2000
Control	0.1818	-0.4706	1.3333	-0.5000
4. Sociability				
Experimental	1.2609	0.6363	1.5714	2.2000
Control	0.1818	0.7059	0.5833	-3.2500
5. Emotional Stability				
Experimental	1.0435	1.0909	2.7143	-1.4000
Control	-1.0303	-1.3529	-0.3333	-1.7500
6. Objectivity				
Experimental	0.5217	1.4545	0.8571	-2.0000
Control	-1.0000	-0.9412	-1.3333	-0.2500



Table 4 (continued)

SCALE	Total	Spring	Fall	Winter
7. Friendliness				
Experimental	-0.0870	1.1818	-0.4286	-2.4000
Control	-1.1515	-0.5882	-1.2500	-3.2500
8. Thoughtfulness				
Experimental	-0.5217	-0.9090	-0.5714	0.4000
Control	-0.5151	-0.4706	0.2500	-3.0000
9. Personal Relations				
Experimental	1.1739	1.3636	1.5714	0.2000
Control	-0.5151	0.0588	-0.6667	-2.5000
10. Masculinity				
Experimental	0.4348	0.2727	0.8571	0.2000
Control	0.3333	-0.1176	-0.1667	3.7500

## Chapter IV

### DISCUSSION

Inasmuch as previous studies (Phelps et al., 1973; Wehmer et al., 1974; and Pullen, 1972) found little statistically significant change in the paraprofessional's personal attitudes as a result of training, it is not surprising that there was little significance found in the present study. Although the primary goal of the present study and the above mentioned studies was essentially the same, that is to detect significant changes in paraprofessional trainee attitudes as a result of training, there were substantial differences in the methodology and procedures used in each study. For example, the paraprofessional groups in each study received different training, were administered scales which measured different attitudes in most of the studies, and the attitude changes measured were not always based upon comparison with a control group.

A more direct comparison might be made between the results obtained by Pullen (1972) on the GZTS and the results obtained on the same survey in the present study. Significance was obtained on different scales of the GZTS in the two studies; Pullen obtained significance on the Sociability scale, whereas in the present study significance

was obtained on the Emotional Stability scale for the experimental group participating during the Spring quarter. This difference in areas of significance could possibly be attributed to the varied types of training received by the experimental groups of the two studies.

Because of changes in the treatment of the control group it was deemed necessary to analyze the data by quarter. Campbell and Stanley (1963) contended that, in truth, a control group is only another experimental group receiving a different treatment. It also seemed most appropriate to analyze the data obtained in the present study by quarter inasmuch as the treatment received by the control group for each quarter was somewhat different, thereby placing each of the three control groups in a different experimental situation. This lack of standardization of the treatment received by the control groups might be seen as one of the primary causes for the lack of agreement among the F-ratios obtained for each scale across quarters. Other factors which might have affected the consistency of the F-ratios across quarters could be variation in the number of subjects each quarter or inadvertent changes in the treatment of the experimental group.

As reported in Chapter III, Results, statistical significance at the .05 level was found on two scales of the EPPS. Achievement scores for both the Total and Spring groups increased for the experimental group and decreased for the control group. Scores on the Nurturance scale also



increased for the Winter experimental group as compared to a large decrease on the part of the corresponding control group.

Statistical significance at the .05 level was also found on a single scale of the GZTS. Scores on the Emotional Stability scale increased for the Spring experimental group as compared to a decrease for the control group.

Although significance at the .05 level was found on the three above mentioned scales, it should be noted that several scales indicated trends toward this level by exceeding the .10 level of significance. In light of certain limitations in the present study, i.e. the changes in treatment of the three control groups and small sample size each quarter, it would seem possible that under optimum conditions statistical significance might have been obtained on those scales exhibiting a trend towards significance.

In view of the paucity of literature available concerning attitude change on the part of the paraprofessional trainee and the design inadequacies found in the literature available, it would seem to be a worthwhile endeavor to undertake further research in this area. If this were done, the inadequacies of previous research and the present study should be considered in developing new research. A primary consideration would be the necessity of utilizing a control group as a basis of comparison. Although the present study utilized a control group, the treatment for that control

group was inconsistent from quarter to quarter leaving doubts as to the reliability of the F-ratios obtained for the Total group. Another consideration in future studies might be the use of a larger group of subjects. This need for a larger N might be fulfilled by the study of all paraprofessional trainees in a specific program for a period of several years. In addition to the above considerations, future studies might employ a more divergent selection of questionnaires, possibly including the Minnesota Multiphasic Personality Inventory, the Sixteen Personality Factor Questionnaire, and some type of self-concept scale.

## Chapter V

### SUMMARY

The majority of the research concerning the effects of paraprofessional training has focused on the effect of this training on the helpee. Little research has been conducted to examine the effects of this training on the paraprofessional himself. Therefore, it was the purpose of the present study to determine if there were significant changes in personal attitudes on the part of individuals receiving human relations training similar to paraprofessional training as compared to a control group not receiving this same training.

In conducting the present study, it was found that there were significant changes at the .05 level in personal attitudes of the experimental group as compared to the control group on two scales of the EPPS: Achievement for the Total and Spring groups, and Nurturance for the Winter group. One scale of the GZTS, Emotional Stability for the Spring group, increased significantly (.05 level) for the experimental group as compared to the control group.

The present study and previous studies in the area of attitude change in paraprofessional trainees have found little statistically significant change in the



paraprofessional's personal attitudes as a result of his training, and all have been plagued by limitations in design. In spite of the lack of significant results found in the present and previous studies, further research concerning attitude change on the part of the paraprofessional trainee should be conducted not only to correct design inadequacies of previous research but also to provide a greater volume of research data on which more definitive conclusions might be drawn concerning the new and growing role of the paraprofessional and his training.

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## APPENDIX A

### Standardized Materials

student number \_\_\_\_\_ Classification \_\_\_\_\_

male or female (circle appropriate response)

major(s) \_\_\_\_\_ I am now registered for Social  
Psychology.  
Yes \_\_\_\_\_ No \_\_\_\_\_

minor(s) \_\_\_\_\_ I am now registered for Human  
Interaction.  
Yes \_\_\_\_\_ No \_\_\_\_\_

age \_\_\_\_\_

Before you begin work on these surveys, please fill in the above information. It is important that you fill in all of the information. If you do not have a minor, omit the section concerning minor field. If your major is Elementary Education, fill in the blank for minor with your area of concentration.

On the answer sheets for each survey, use your student number instead of your name. This is the only information which you need to place on these answer sheets other than the marking of answers.

Before you leave, please make certain that your student number is on this sheet and all answer sheets.

All information on this sheet and results from the surveys shall be kept confidential or reported without identification of those who took part in the study.

Please read the instructions on the front of each survey before you begin work. Ignore any directions on the surveys instructing you to wait for instruction to begin work.



Once you have completed the surveys, replace all of the materials in the folder, leave the folder at your seat and leave quietly.

You will be notified in your class as to when your assistance will be needed again.

THANKS FOR YOUR ASSISTANCE

Before you begin work on these surveys, please place your student number in those blanks indicated for your name. This is the only information which you need to place on these answer sheets other than the marking of answers.

Again, you are reminded that all information and results obtained from these surveys shall be kept confidential or reported without identification of those who took part in the study.

Please read the instructions on the front of each survey before you begin work. Ignore any directions on the surveys instructing you to wait for instruction to begin work.

Once you have completed the surveys, replace all of the materials in the folder, leave the folder at your seat and leave quietly.

THANKS FOR YOUR ASSISTANCE

## STATEMENT UTILIZED IN OBTAINING SUBJECTS

Presently, I am working on my thesis and will be conducting part of my research for my thesis this quarter. In order to conduct my research study I will need as many volunteers as I can possibly obtain and I am asking for volunteers from your class. Those of you who do volunteer to help me with my research study will be asked to spend two hours twice a quarter completing some pencil and paper surveys concerning point of view and personal opinion. Because all of my volunteers will come from only two classes, I will need as many volunteers from this class as I can obtain.

I realize that this is a lot to ask of those who do volunteer to help me out, so I have talked to your instructor and the instructor of the other class and they have agreed to give those who participate in this study some extra credit. In order to receive this credit, those who volunteer must participate in both sessions. The first session will be held this week and the second session will occur before finals at the end of the quarter.

Since I realize that everyone who will volunteer will not have similar schedules as to when they will be able to participate, I have scheduled the session for several different times. I am going to pass around a sign-up sheet for those who wish to participate. Please sign this sheet under the session which you are able to attend. Do not use



your name in signing this; use your student number. Also, I would like to assure that your answers to these surveys will be seen only by me and whoever assists me in accumulating the data. If anyone else sees any of the answer sheets, steps will be taken so that they will not be able to identify those who completed the surveys; this includes your instructor.