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# Erhard Seminar Training in a Correctional Institution

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FEDERAL CORRECTIONAL INSTITUTION, LOMPOC, CA 93436 March, 1980

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## Foreward

This monograph is an assessment of Erhard Seminars Training (est)* within a correctional institution. It is the most extensive single effort to our knowledge to assess the effects of such a self-awareness program, whether inside or outside a correctional setting. The fact that the study took us approximately five years from conceptualization to completion deserves some explanation (not an apology) and goes a long way towards explaining why there are so very few empirical research papers on human potential programs.

This study began in January, 1975, when I was called to the Associate Warden's office at FCI, Lompoc, where there were two representatives of est. All three persons (the AW was an est graduate) descended on me with the appeal that I come up with a research document that would "prove," once and for all, the impact that est has on inmates. est had come to the Lompoc prison previously on two occasions free-of-charge, and the argument was that they would come back one more time only if research were provided. It was implied that est would support the cost of the research up to $75,000. To say the least, I was exhilarated at this chance to assess such a new and popular program and quickly contacted Dr. Ray Hosford, our consultant from the University of California, Santa Barbara, in regards to becoming involved. He then wrote a proposal using the Solomon Four-Group Design on which this study is based.

During this period in time, we also had another human potential program at the institution, Transactional Analysis (TA), which was included into the proposal as a means to assess both programs, each acting as a control for the other. Approval for the research was obtained originally

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*now named Educational Seminars Training.

from Frank Kenton, Warden, FCI, Lompoc, and Mr. Howard Kitchener, Bureau of Prisons Central Office Research Director, and the proposal was submitted to the est organization the last week of February, 1975. Six months later a meeting was held in the Lompoc, FCI, Warden's Office in which representatives of est told us they were against any active research control group, i.e., TM. We were assured that est was still willing to fund the research costs and thus Dr. Hosford and I went back to the "drawing boards." A new proposal was submitted just three weeks later.

Two months from that time (October, 1975), a third meeting was held with est representatives at FCI, Lompoc. We were told for the first time at that meeting that est itself could not fund the project because they had no money for this purpose but instead the cost must be borne by the est Foundation. Emphasis was placed on cost-cutting and we rewrote the proposal for the third time and resubmitted it in December, 1975. The new proposal had been cut to $26,000.

During 1976, a waiting game began. Meanwhile, the original warden at FCI, Lompoc, retired and his successor was a person not enthused about psychologists engaging in any research project but felt that since the obligation had been made, we had to observe it. In September, 1976, I was invited to attend an est conference on research in San Francisco. Instead, the administration decided to send our consultant, Dr. Ray Hosford. During that meeting he had a chance to talk to Don Cox, the President of the est Foundation and learned that the est Foundation was not encouraging of the FCI proposal. Predictably, in late September, I received a telephone call from est, informing us that the Foundation also "had run out of money." We were also informed that there could be no further institutional training unless we came up with the funding. After all the work and numerous delays, I was crestfallen. In desperation, I called NIMH and LEAA but without success.

However, the next week, I sat down with Warden Grossman (the third Warden at FCI, Lompoc) and made the plea that Dr. Hosford and I be given eight days of the former's consultant time to assess est if that organization could be persuaded to provide the training. In addition, an appeal would be made to Mr. Kitchener for monies to pay the graduate students who would have to collect much of the data. The call to the Research Office actually elicited $2,000 (another $2,000 was forthcoming for the next fiscal year). Mr. Kitchener also was persuaded to volunteer Ms. Helene Cavior, Regional Office Research Consultant, to help us in the collection of the data. Her help in the later phases of data analysis was invaluable. In November, a letter was drafted for the Warden's signature and sent to Werner Erhard. After five months, the date of the est training was established and the training actually became a reality in June and July, 1977. Dr. Kerish (a psychologist at FCI, Lompoc, and another est graduate) assisted in the mechanics of the training.

The allotted eight days were nearly sufficient to allow us to collect the physiological and psychological data on our groups; collecting the behavior data which involved the graduate students examining data in the Central Jackets took three times as long. The demographic data was left until much later since it was being routinely collected and stored in a computer at the Central Office. We essentially had the data either collected or in computer reels by the end of 1977; however, the analysis of the data took all of 1978 and well into 1979 because of the hundreds of hours that we had to devote, all on our own time. In the writeup that occurred during the months that followed by Dr. Hosford, Ms. Cavior, and myself, it was also necessary that no time was lost from our main occupations. Dr. Kerish helped with the final draft.

Dr. Morris Parloff, Chief of Psychotherapy and Behavioral Intervention Section, NIMH, in a review of an "authorized story" of Werner Hans Erhard (1978) complained that Werner had "graciously provided me with a training scholarship" to take est, but despite his (Parloff's) expressed interest in putting est under research scrutiny, they were never able to arrive at a "mutually acceptable research project." It is our fervent hope that we have managed to do just that. We, too, were offered scholarships to take est but refused because we did not want our objectivity prejudiced.

In retrospect, having become involved in an assessment of est, we felt honor-bound to complete it; but because of the vast amount of time and energy, this is a one-time event in our professional careers. Had this been a normally funded project, we estimate that it would have cost well over $100,000. This is our gift to the Federal Prison Service.

In addition to the many people already mentioned, we wish also to thank Byron Allen, consultant to the biofeedback part of the study, and Edith Daughton, Phyllis Hosford, Bette Moss, and Sharon Hong, without whose nimble fingers this report would never have been typed.

C. Scott Moss, Ph.D.

# Chapter I

## est

### Notes about the Founder

est was founded by Werner Hans Erhard known previously as John Paul Rosenberg. Born in 1935, the son of a Philadelphia restaurant owner, Rosenberg's formal education ended in 1952 with graduation from high school. Rosenberg married shortly thereafter and four children subsequently were born. In 1960, Rosenberg abandoned his wife and children and went to St. Louis with a woman who later became his second wife and mother of three more of his children. In order to avoid discovery by his family, Rosenberg changed his name to Werner Hans Erhard. He composed the name while reading an Esquire article about modern Germany: "Werner" from Werner Heisenberg, formulator of the Uncertainty Principle, "Hans" from Bishop Hans Lilfe, and "Erhard" from the then German Economics Minister, Ludwig Erhard (Bartley, 1978). A variety of explanations have been advanced as to why Erhard chose the name he did. Kornbluth (1976), for example, says that a friend of Erhard's from that period recalls that Rosenberg had long admired Nietzche and, like the philosopher, held the creation of a super race among his greatest ambitions. However, Erhard himself relates that he had wanted a name as different as possible from his given name in order to avoid being located by his family (Bartley, 1978).

After leaving Pennsylvania, Erhard was completely out of contact with his original family for 13 years. In St. Louis, Erhard was a representative for a school which taught the operation of construction equipment and for a time he also sold used cars. Later he taught courses for a correspondence school and subsequently became a salesman for the Great Books Corporation. When not at work, he studied hypnosis. In 1962, Erhard moved to the West Coast and joined the Parents Cultural Institute (PCI), a

Parents Magazine subsidiary whose business was primarily the selling of encyclopedias. He rapidly became a vice-president, responsible for the hiring, training and supervising of the sales force (Brewer, 1975).

In 1969, Erhard became a division manager for Grolier Society, Inc., another door-to-door encyclopedia company. Again he was responsible for training salespeople and managers. In 1970, Kornbluth (1976) relates the State of California filed two suits against the Grolier Society, charging that their sales techniques were deceptive. The State was successful in bringing permanent injunctions against the firm. Bartley (1978), however, notes that Erhard was in no way associated with the legal action (p. 146).

The founder of est was an insatiable reader of a variety of books on human motivation and behavior. Among these were Napoleon Hill and Maxwell Maltz's positive thinking and self-imagery psychology; Abraham Maslow and Carl Rogers' "human potential movement," B. F. Skinner's deterministic behavior theory, Ron Hubbard's Scientology, Zen Buddism, and Mind Dynamics. By 1971, Werner Erhard was approaching his formulation of est.

How the training system became to be known as est has had a variety of explanations. According to Kornbluth (1976), a former Erhard associate, Bill Thaw, a used car salesman from Philadelphia, helped Erhard found est. Thaw reputedly found the name for the new organization in the book called est: The Steersman Handbook, by L. Clark Stevens (1970), which predicted the rise of the "est people" who could inevitably and invisibly transform society. est evidently originally meant the electronic social transformation. The est organizational version as promulgated in their Guest Seminars is the word est is merely Latin for "it is." When originally denied the est label for purposes of incorporation, the name Erhard Seminars Training was proposed because it used the same letters and was acceptable to the authorities as a corporate name. Upon a subsequent reorganization the name was changed to est: an educational corporation.

Erhard himself notes that the 13 years (1958-1971) of hustling "in the business jungle" were ideal for obtaining his genuine insight into the underlying nature of the human mind. In an article in the East West Journal (Erhard, 1973), he stated:

> I was doing a thing which today is called 'Executive Development and Motivation' and my job was to work with people in such a way that productivity increased and leadership increased and executive ability increased. Someone figured out that I spent 36,000 hours in those 13 years in one-to-one and group sessions, which is seven solid years, night and day, if you count it up. . .business is such a beautiful place to do that. If I had been at a University I would have just dabbled in these things because they were out of my department. You can't do anything serious outside of your department (p. 3).

and

> I got a chance to take my experience in Zen and translate it from the usual setting to a new setting. . .(I used) Dale Carnegie, Maxwell Maltz, American Management Association, Industrial Psychology, PACE. . .I found stuff that nobody else found. I subjected myself to as many different disciplines as I could find. I either studied them, or I practiced them, or had people do them to me, or I learned to do them to people, or whatever. . .philosophical disciplines, body disciplines, etc. (p. 4).

Then in 1971, he noted that while driving his wife's car on a freeway somewhere near San Francisco he had the catalytic experience that focused together all his years of training. Erhard describes it as an enlightenment.

> What I recognized is that you can't put it together. It's already together and what you have to do is experience it being together. When I realized that, everything I'd already learned became transformed (Kornbluth, 1976:42).

It was as if for 13 years of his life, Erhard had searched for "it" until he suddenly realized that striving for the experience was just what kept him from having the experience. "It was like I got born there; and from that point Erhard had 'it'" (Burg, 1974). From this experience, Bartley (1978) indicates Erhard resolved to do three things: (1) to share what had happened to him; (2) to take responsibility for his ego, and (3) to "clean up" his life--to correct all the lies and deception in his life.

The personal crisis of John Paul Rosenberg, alias Werner Erhard, was now officially over. Through the final formulation of est he had achieved an "expanded experience of self." He was transformed from a family deserter, adulterer, con-man, and hustler to the charismatic leader of a new type of human potential training alleged to lead persons to the realization of their innate potential.

In mid-July of 1971, est training began and in October of 1972, Erhard re-established contact with his original wife and children, parents, and relatives. Later, members of his extended family took the est training and some of them today still work for est, including the former wife.[1]

The Training

According to Don Cox, president of the est organization, the est training is not psychotherapy. He states:

> It is not like group therapy, sensitivity training, encounter groups, positive thinking, meditation, hypnosis, mind control, behavior modification, or psychology. In fact, est is not therapy and is not psychology. We specifically point that out to people before they take the training. We tell people that if they need therapy or psychological, psychiatric or medical services, they should see a therapist, psychologist, psychiatrist, or physician, as appropriate (Cox, 1975, p. 1).

Erhard, an admirer of Maslow's hierarchy of needs, designed the training for individuals who supposedly are meeting their physiological and psychological needs but are more concerned with gaining a higher level of satisfaction (Bry, 1976). According to est brochures, the training is concerned with completion of the experience of those moments in which the individual is complete, whole, and fulfilled. The peak experiences described by Maslow (1964) are such moments. As trainees learn how to create such moments of self-actualization, a transformation supposedly takes place from being controlled by the effects of life to originating life the way it really is (Erhard & Gioscia, 1977).

Theoretically, the training's content is guided by an underlying assumption that one's personality is a composition of three selves (Erhard, 1977). Not unlike Jung's persona (Jung, 1965), the first self is that which we pretend to be. The second self is that which we are afraid we really are; a self similar to that of Jung's "shadow." In order to gain the third, i.e., true, self, we must confront all of the aversive thoughts we conjure relative to the self we think we are. Completion of this experience is innately satisfying and causes a sense of wholeness, of being "complete" right now. In essence, one's efforts are directed toward experiencing the process of life itself rather than expending energy toward trying to change or learning to live with those negative aspects of our lives (Erhard, 1977).

According to Erhard (1975), the central ingredient of the est training is directed at epistemology, ontology, and ethics. First, the training offers participants an epistemological experience, i.e., ". . .the opportunity to look at, to examine, to observe the ways in which they know the things they know" (Erhard, 1975, p. 4). Second, ontology, i.e., the theory of being, becomes a focus. In this part, participants are provided opportunities to ". . .consider what is so, what constitutes reality, what constitutes unreality. . ." and to connect this understanding with the way in which they know the things they know. Third, training in ethics is included to provide participants the opportunity to consider the implications of the way in which they know about reality and unreality for their personal integrity and personal responsibility.

Another basic ingredient of est, education, is to teach participants new ways of experiencing the process of living. It is in the educational part of the training that the participants are taught how to apply i.e., experience, these learnings in their own real-life situations.

The training supposedly transforms each individual's experience of living so that the things he/she has been trying to change in his or her life clear up in the process of life itself. Erhard, for example, says,

> Sometimes people get the notion that the purpose of est is to make you better. It is not. I happen to think that you are perfect exactly the way you are. The problem is that people get stuck acting the way they were, instead of being the way they are (Erhard, 1975).

This tenet is taught with a method by which each person experiences and looks at what is reality and non-reality with regard to specific areas in his/her life; particularly the early or fixed attitudes about those areas. Similar in part to Gestalt Therapy, Zen, and some disciplines of the Far East, the training stresses knowing being gained through the experience of submerged feelings, i.e., boredom, anger, contempt, rather than that gained through the more traditional cognitive or self-detached learning process. Throughout the training, the message of responsibility is stressed and restressed. An example of this stress for self-responsibility is vividly pointed out by Marcia Seligson, a writer, who was a participant in the est training.

> You are totally responsible for your life; you are the cause of all your experience. 'Responsibility,' in est terms, is defined as 'the willingness to acknowledge that you are the cause in the matter' (1974, p. 166).

Training format. est training consists of three segments. First, the trainer establishes guidelines and presents material which is designed to break up individual patterns of thinking and to "open" participants for experiencing directly. Specific ground rules are read to emphasize that each participant is responsible for his/her own behavior. Indeed, in the beginning session, six pages of agreements are often set forth by the trainer. Examples include no eating or drinking except at specified times; no leaving the room to go to the bathroom or elsewhere without permission;

no sitting next to a friend; no bringing in of time pieces, pens or pencils, and no taping of the sessions. Originally, an agreement sheet was placed beneath each chair which was to be signed by each trainee (this is no longer done). The agreement was that the "confidentiality" of the training would not be violated. During the sessions, participants are urged to reveal their on-going experiences of the training. The sessions typically last 15 hours each and are carried out over a course of four days--a total of 60 or more hours.

The second phase according to Erhard consists of, "a thorough explanation and discussion leading to an understanding of the training processes." The third part is doing the training processes as directed. A training process

> . . .is a method by which a person experiences and looks at, in an expanded state of consciousness, without judgment, what is actually so with regard to specific areas in his life, and his unconcious or fixed attitudes about these areas. The result of doing a training process is a release to spontaneity (Erhard, 1975).

Throughout the training, if a participant starts to faint or has an aversive reaction, the trainer may not interfere. Instead he/she addresses the audience emphasizing that some people would rather die than look at themselves seriously. Supposedly, by not being "sucked into" that person's "life game," the trainer renders the participant a great service. As a result, the trainee may choose not to faint or to have a hysterical reaction (Seligson, 1976).

According to Woodward (1976), this is the precise purpose of the physical deprivation aspects involved in the training. Many of the techniques used in est are aimed at dislodging trainees from their belief systems. This is achieved through various strategies: by restricting food and drink, by inducing physical and mental exhaustion, and by frequent verbal

attacks on the ego. Gradually, trainees are forced to give up their "beliefs" and to focus on their experiences of what is happening to them. Some cry, faint, or get sick. Then, dialectically, they are shown how to make these and other discomforts dissolve through various cognitive restructuring exercises. According to Woodward, once trainees realize that consciousness can alter bodily states, they are prepared to accept one of est's cardinal principles: "I am the cause of my own world" (Woodward, 1976). For example, on the first day if a person were to ask why he/she can't do some activity, the person is simply told that these are the agreements and they are the agreements because they work. The first part of the training which is about agreement is designed to demonstrate to the participants that people often do not keep their agreements even for a very limited period of time. est is presented as a microcosm of the real, macrocosm world outside. The world is filled with broken promises and each person develops an awareness of his/her own behavior in keeping agreements.

Another part of the initial experience comes about through confrontations with the trainer. A participant can address the trainer at any time by raising a hand and being recognized. A typical confrontation is one in which a person takes issue with what the trainer says or does. The trainer may say, "Well, that's okay. You do not have to agree with me." Should the individual persist and want to explain his/her idea in detail, the trainer may then indicate that he/she is not interested in that person's good ideas. If he/she still persists, the confrontation often becomes an assault not on the person but on the person's belief system. The trainer may intentionally take est's position on any subject discussed, down playing the trainee's idea. Some participants feel personally insulted; however, it is the position, not the person, that the trainer has attempted to devalue.

Another aspect that may be aversive to participants in the beginning is that of being called "assholes," the definition of an "asshole" being a person who does not recognize that he/she is one. The "asshole" strategy is a designed assault on righteousness. It is an attempt to get people to drop their masks. Indeed, a part of the training is actually called the "Asshole Exercise." It involves getting people in front of the body of trainees doing an exercise of "making an ass of yourself." For example men may play the role of a little girl getting up in front of her mother's bridge club. The exercise supposedly allows the person to realize that he/she has acted this way before in life and will again, so there is no point in expending energy trying to cover it up. The "Asshole Exercise" is also an assault on defensiveness--the need to be right all the time--in that it gives participants an opportunity to look at how people strive to meet everyone else's opinions and standards.

There is the distinct possibility that Erhard is not trying to teach anything just as he has stated in the sessions and elsewhere. The training may have as an objective to promote an experience to occur in which participants look at themselves and see the constricting effect that their belief systems have on keeping them from living "complete, whole, fulfilling lives." It is probably due to this aspect of est that the training is often referred to as a self-awareness system or an experience of higher consciousness. Erhard himself, in a presentation before the American Psychiatric Association 1976 Conference, described est as

> . . .a transformation--a contextual shift from a state in which the content in your life is organized around the attempt to get satisfied or to survive--to attain satisfaction--or to protect or hold on to what you have got--to an experience of being satisfied, right now, and organizing the content of your life as an expression, manifestation and sharing of the experience of being satisfied, of being whole and complete, now. One is aware of that part of oneself which experiences satisfaction--the self itself, whole, complete, and entire.

The natural state of the self is satisfaction.

> You do not have to get there. You cannot get there. You have only to 'realize' your self, and, as you do, you are satisfied. Then it is natural and spontaneous to express that in life and share that opportunity with others (Erhard, 1977, p. 112).

Indeed, the est experience is described as nothing less than profound enlightenment by Marcia Seligson (1976):

> The variety of techniques for penetrating defenses are brilliant, including the no-exit, 16-hour-a-day marathon and the creation of a totally safe space for self-disclosure. Erhard has blended the wisdoms of Zen, Gestalt, general semantics, Taoism, the Bible, Dale Carnegie, Gurdjieff, mind dynamics, and other disciplines and created an experiential training--as he says, 'est is the experience, rather than the understanding of those disciplines.' It is not therapy, not a head trip, not physical exercise, but enlightenment (p. 165).

Graduate seminars. In addition to the standard training, graduate seminars are provided for graduates who desire to participate beyond their initial training. All graduates receive a monthly newsletter, The Graduate Review, which informs them of est activities. According to the stated desire of the graduate, he or she will receive a phone call concerning: (a) every est event, (b) special events, (c) once-a-year followups; or, not receive any calls whatsoever.

Several graduate seminars are offered. Seminars address such topics as sex, money, self-expression, etc. Charges for the seminars in relation to the standard training--which as of 1979 is about $350--are nominal. Special topical guest seminars are also presented; "Love in Close Relationships" and "To be or not to be--the Question is Who?" are two examples. Repeat workshops utilizing videotapes of Erhard original presentations entitled "Making Relationships Work (I, II, III)" are made available to graduates. These followup workshops evidently are designed to help graduates continue to be responsible for their experience of life.

In addition to the graduate seminars and the personalized est training per se, the est organization has broadened its training programs to include public and private organizations as well as whole communities. Training sessions have been donated to a variety of hospital staffs, school groups, police officers and prison inmates and staffs.

Who Takes est

By mid-1975, over 35,000 had already completed the training (Brewer, 1975) and by 1978 this number had increased to well over 175,000 (Parloff, 1978). By October, 1979, there have been more than 240,000.[2]

Trainees come from many cultural backgrounds but in the majority represent white, middle-class, professional people. Indeed, Erhard has been described as capturing the white middle class in much the same way that Billy Graham has snared the working people (Woodward, 1976). The particular appeal of est for the affluent is explained by Marin (1975) as a result of its assertions that shame and guilt and social responsibility are nonsense terms, that economic injustice, suffering and oppression are the lot of certain individuals because they have "chosen" to be the victims. According to Forbes magazine (1975), 17 percent of est graduates, as of 1975, had completed college, compared to 8 percent of the general U.S. population and 22 percent had done post-graduate work, compared to 2 percent of the population as a whole. Schwarzbaum (1975) noted that 20 percent of the Boston graduates work in the education field, while est organization data indicate about 15 percent of the graduates are in some field of education, 3 percent in the health-related fields, 4 percent in the media, and approximately 1 percent in the clergy (Babbie & Stone, 1977).

Evaluations of the Training

Almost every est graduate gives favorable reports of the est experience after completing the training. Even those critical of est agree

that the training is a profound experience (Babbie & Stone, 1972). Some graduates claim that their lives have actually been transformed. Others relate that it was a positive experience but nothing "earth-shattering." Very few indicate that they experienced no benefit at all. The majority of graduates attest that est has changed their lives, improved their relationships at home, helped them lose weight, cured headaches, or helped them get better grades at school (cf., Francke, 1975; Litwak, 1976). Seligson (1975) relates the following:

> Most of the 42,000 people who have done the training say they have been transformed, have moved from being the victims of their lives to being creators. Among other benefits, est 'graduates' get sick less often than other people and have a particular stamp of vitality. Personal responsibility is the key message (p. 18).

Schwarzbaum (1975) similarly states:

> I experienced myself differently and that feeling has been indescribable. I see things differently--standing in the same mire, to be sure, but looking 180° outside my usual viewpoint. There is an energy releasing clarity to my vision, even when I am bogged down in the same old stuff: I got that I have chosen to be there (p. 89).

Most self-reports of est graduates indicate that the experience is of great personal benefit to them and opine that it is unique among the contemporary routes to personal freedom. As Burg (1974) notes:

> In short, I feel significantly more autonomous and at ease in the world as a result of the est training, and I'm glad I went through it. . . What est does is give you an opportunity to look at your life and what you want to do with it from a point of view that you may not have had before. Once you've begun to experience yourself as you do in est, you just know that there's no other discipline that can do this for you. . . It really does make working with people a lot less heavy these days (pp. 53-54).

On the other hand, some e.g., Brewer (1975), Fenwick (1976) and Simon (1977), feel est may be little more than just another package resulting from one man's overwhelming ambition to make money.

The promotional literature produced by est presents a picture of a highly successful, immensely popular, fast-growing educational--if not

therapeutic--process which has produced beneficial results in the areas of social relations, medicine and education. For example, an informational circular called "Background information on est," written by Don Cox, former Vice President of Coca Cola and presently President of est an educational corporation and Chairman of the est Advisory Board provides a listing of the Advisory Board members and explains the financial structure, philanthropic activities and other important facts about the corporation. The roster is impressive. Among the Advisory Board's members are several M.D.s, Ph.D. or Ed.D.s, and national/international celebrities from a variety of callings.

Three short articles, "What is est?", "Erhard: Sharing est with Japan," and "In the Schools," written by Werner Erhard, Neal Rogin, and Elizabeth Russell, respectively, and published in an est periodical called What's So in Hawaii are but a few examples of the est literature. The first is a presentation of the est tenets, the second an account of Erhard's encounter with various Japanese spiritual masters, and the third a description of projects that est has sponsored in the New York, California, and Hawaii schools.

Popular literature. Numerous articles on est have appeared in lay magazines. They tend strongly to be subjective or testimonial accounts of the experience rather than empirical evaluations of the training. One testimonial (Seligson, 1975) which states that the training produced objective, physical benefits for the graduates was written by Seligson who later became a member of the est Advisory Board. In Vogue, she claimed that "est 'graduates' get sick less often than other people and have a particular stamp of vitality" (p. 18). Relative to such claims, Don Cox, president of the est organization cautions:

> There is a natural tendency to be skeptical of graduates of a four-day training who indicate that they have experienced a transformation such that not only do their lives begin to be more fulfilling and work better, but also that the improvement increases over time. No claims, guarantees or promises of results are made for est training. This would be inconsistent with the purpose of the training (1975, p. 1).

Nevertheless, there are numerous books on est which constitute a very elongated testimonial for the organization. Among these are the writings of Stevens (1970), Green (1976), Hargrove (1976), Mark (1976), Porter and Taxon (1976), Bry (1976), Bartley (1978), and Appelbaum (1979). Fenwick (1976) calls attention to the fact there have been no published experimentally designed scientific studies of the est training.

Professional/clinical literature. Menninger (1978) states that it is because the mental health professions have not addressed themselves sufficiently to the psychosomatic problems of living, being more concerned with mental illness per se, that ". . .people have gone elsewhere in search of quick and easy solutions" (p. 80). "Many of these so-called therapies--est, primal scream, meditation, yoga, encounter--," according to Menninger,

> have been responses to a two-pronged impetus: one, a real cry from the marketplace that says, 'Give us something that will help us deal better with whatever it is that's bothering us,' and two, a disappointment that psychiatry and medicine have not considered these troubles important within its realm (p. 80).

In general, evaluative articles and books on est training appearing in the professional literature have not been as positive in their assessments as have those in the lay press. Although popular in the professional literature, est is also controversial. Studies and articles about the training have been highly supportive (cf., Babbie & Stone, 1977; Berger, 1977; Bry, 1976; Kleiner, 1977; Shaw, 1977) and strongly derogatory (cf., Brewer, 1975; Fenwick, 1976; Kirsch & Glass, 1977; Simon, 1977). Despite the proliferation of the training and publications about est, very little independent and objective evaluative studies have been reported in the

literature. When designing the present investigation, the authors could locate only two general publications addressed to evaluating the effectiveness of est and both of these were est funded investigations. However, more recently other reviews (e.g., Babbie & Stone, 1977) have been published which are independent of the est organization.[3]

One of the first evaluative studies is the Behaviordyne Report (Erhard Seminars Training, 1973). The purposes of this pre-post designed evaluation were twofold. First, the authors sought to determine if the est experience produces any measurable personality changes; and second, if such changes do occur, do they last over time. More specifically, the study attempted to objectify many of the changes described by est participants.

The California Psychological Inventory (CPI) was administered to all individuals enrolled in a particular est session prior to training, then readministered at the completion of the program and again three months later. The results of the study showed that certain personality variables were found to change after the subjects completed the est training. Moreover, these changes continued to manifest themselves three months after the training terminated. However, the authors claim that the significance of the study was found more in the clinical evaluations than in the statistical results. After noting that the precise causes of the personality changes on the CPI remain open to speculation, the authors observed that it was the group that completed the training and remained in contact with est that demonstrated the most significant positive psychological changes. They concluded:

> . . .almost any dramatic experience can cause some immediate change in a group. What is crucial is whether the change is positive, and whether the change can be maintained. Clearly the changes measured are positive. Equally clear, they can be maintained at least for three months, and probably for a longer period. Where changes do occur they probably started as a result of the original training and are benefited by supportive seminars.

> It occurs to us that the sociotechnological forces that help create the need for awareness experiences are increasing and the need for programs such as est will continue to exist and grow (Erhard Seminars Training, 1973).

The second est evaluative study was the est Outcome Study (Ornstein et al., 1976). In early 1974, Ornstein and his colleagues surveyed more than 10 percent of the est graduate population in existence at that time. After having completed the training, graduates were asked to report both their experiences of health and well-being after the est training and their experiences of health and well-being the year before the training.

The two-year project involved over 200 volunteer workers with responses being obtained from over 1,400 est graduates. Personal interviews, questionnaires, followup surveys, and telephone calls were used to obtain the data. The respondents as a whole reported that strong positive health and well-being changes had occurred since taking the est Standard Training. This was especially so in the area of psychological health relative to illnesses having psychosomatic components.

The investigators noted that their results were verbal and therefore not empirically provable. They were careful to state that the study did not demonstrate that participants' health actually changed, but only that their self-reports did. After reassuring the reader that the accuracy of the data was good because 77 percent of the subjects responded, they note that the greater benefits were reported by those who were more involved in and concerned with est. While they cautiously encourage future investigation, they also noted that placebo effects and other demand characteristics of the study, e.g., desire by the respondents to present a positive image to the world or perhaps to give an overly positive view of themselves, may have been the "causal" elements of change rather than est itself.

Without a control group of subjects randomly drawn from the same populations who desired but did not receive training, it is difficult, if not impossible, to ascertain whether the personality changes occurred as a result of the est training or because other variables affected the internal validity of the study. The fact that the subjects were surveyed only after the training and asked to relate their responses for both before and after completing est, further makes it difficult to make statements of causation. Whether persons after the training can accurately reflect how they would have responded before the training is questionable. However, the results were sufficiently positive to justify a replication of such a study in which more control of extraneous variables was possible.

Babbie & Stone (1977) in a similarly designed retrospective self-report study using data from a 1973 est-initiated survey of some 2,000 graduates, concluded that graduates of the training indicate quite strongly that their lives benefited appreciably in a variety of situations after completing est. They note that the benefits did not appear to diminish over time ". . .as measured by the comparison of old and recent graduates" (p. 138). After reviewing their data and conclusions, Babbie and Stone noted that subsequent studies are needed that collect data over several periods of time, provisions should be made for adequate control groups, and that independent non-self-report measurements of "benefits" should be assessed.

Several articles in the literature have addressed themselves to explaining why est graduates appear to make such quick and dramatic changes in their personal lives. Clark (1976) makes use of the "mortification process" put forth by Irving Gottman in his book on Asylums to explain why est produces

> . . .the 'mortification process used to modify behavior in such 'total institutions' as prisons, monasteries, mental hospitals, orphanages and, in my experience, Marine Corps boot-training camps. Neither est nor a (religious) revival is a 'total institution,' but an understanding of the mortification process illuminates the psychodynamics of their quick-change process. A person comes into a total institution with a self-image supported by home and work environments. Upon entrance, he is immediately stripped of the support provided by these arrangements. . . (instead) he begins a series of abasements, degradations, humiliations, and profanities of self. His will is systematically, if often unintentionally mortified. He begins some radical shifts in his moral career, a career composed of the progressive changes that began in the beliefs that he has concerning himself and significant others (p. 983).

For Clark, this process is the very essence of est. He compares est to religious revival meetings and refers to the training as a form of "secular salvation."

Some have used the term "brainwashing" to describe the method used to explain how est produces its results. Brewer (1975, p. 35), quotes a line from an est trainer: "We're gonna throw away your whole belief system. . . We're gonna tear you down and put you back together." "Such efforts," Brewer states, "of course, are commonly known as brainwashing, which is precisely what the est experience is, and the result is usually a classic conversion." In contrast, however, Marsh (1975, pp. 39-40) in refuting this charge, states that brainwashing attempts to confuse individuals by the use of sudden reversals of logic and to frighten and humiliate individuals in order to break their will and forcibly institute the belief system of others. est, Marsh states, is exactly the opposite. It is coherent and noncontradictory. The training, he asserts, stresses the foolishness of all belief systems including that of Werner Erhard. It builds its case on the inescapability of personal responsibility. Further, he notes, the est training is an attempt to release the individual from the cultural trance, the systematic self-delusion to which most of us surrender our aliveness.

Brewer (1975), on the other hand, says that even members of the est staff are sometimes vague about the exact mechanisms utilized in promoting change. In an excerpt about Philip Lee, a psychiatrist and member of the est advisory board, Lee in recalling that he had had backaches for 18 years which he had always attributed to a slipped disc, credited est staff with having pointed out that his backaches were related to his relationship with his father. When asked how he thought the process worked, he was unsure of the causal mechanism involved:

> Well, I don't know. You know, I had that experience. But I'm a very uh. . .you know, I think it's easy to be conned. I think we're very gullible. I'm skeptical constantly about whether it had all these profound effects (Brewer, 1975, p. 35).

Not surprisingly, many psychiatrists and psychologists are "put off" by est's hard sell. Yet, some concede that est can be a positive experience for the average American. "On a philosophical basis, I agree with est," says Berkeley psychiatrist, Manfred Behrens, who has taken the training. "I just dislike the form" (Woodward, 1976, p. 58).

As Litwak notes, individual responsibility, accepting oneself, you are perfect the way you are, are all phenomena with which we all agree. An East Bay psychiatrist according to Litwak, sent 52 patients through the training and thought the training produced "dramatic results." In 12 cases, est training supposedly shortened the course of psychotherapy. However, est apparently does not work as well for those undergoing an acute crisis or those who have been diagnosed as borderline psychotic (Litwak, 1976).

Recently, three articles by psychiatrists have been published which comment on possible dangers associated with est training. In one article, Malone (Malone, 1976) warns that est may destroy defense mechanisms which individuals have been using to cope with life stresses and in some cases

may induce psychoses. Glass, Kirsch and Parris (1977) also report that some persons developed psychoses after participation in est. The authoritarian est leadership style may, according to the authors, mobilize in trainees an overdetermined and pathological reliance on identification with the aggressor. Further, Kirsch and Glass (1977) identified two additional cases that supposedly developed psychoses after est training. They noted that controlled research is necessary, however, before any objective statement can be made relative to psychiatric disorders resulting from participation in est.

In summary, the est training, the est organization and its founder, Werner Erhard, have received controversial notice in the literature. However, the large number of est graduates are overwhelmingly supportive of the training. Previous studies of the results of the training have relied upon self-report, physician report and, in one case a pre-post administration of the California Personality Inventory. The value of a controlled empirical study should be obvious in the arbitration of the issues raised about the value of the est training.

est and Corrections

As indicated earlier, est has extended their training programs to include a variety of public and private organizations. Among the first institutions to utilize the est training was the Federal Correctional Institution (FCI) at Lompoc, California. During the Spring of 1974, est provided training free to the institution's inmate population. In 1975, a second separate training occurred and in 1977 they returned again to participate in the present experimental study to determine empirically whether participation in est promotes psychological, behavioral and physiological change in inmates. The training has since been provided at San Quentin

Prison (1976), Leavenworth Penitentiary (1977), and Alderson Federal Correctional Institution (1978).

"Getting 'It' in Prison" (Rogin, 1974) is the first account of est training being given in a prison setting. Written by an est staff writer, it presents an extremely positive view of the training and its effect on the inmates. It is of purely narrative form and makes no pretense at being an unbiased account.

Moss and Morrell (1974), at the request of the Lompoc facility Warden, completed a post hoc study of the original F.C.I. training. They conducted 20-minute semi-structured interviews and administered a five-concept Semantic Differential Test to three groups of five randomly selected inmates. The first group was comprised of inmates who had begun and completed the 1974 est training; Group II was selected from those inmates who had begun est but had not completed it; and Group III was comprised of inmates who had not volunteered or participated in the training in any manner.

The self-reports clearly indicated that est was judged as "an overwhelming experience" which had made "a significant impact on (the inmates) lives." The first group was more extreme or positive in their semantic differential ratings than either Group II or III. In the conclusion, it was stated that there was no doubt that those inmates who enrolled and stayed throughout the training found it an exciting and worthwhile experience, even though they were unable to agree upon exactly what ingredients went into the venture.

The authors stated, "there is a mystique connected with est," to wit, "it is possible that the sheer charisma and power of Erhard and his associates contributed substantially to the effect." This charismatic quality may have been enhanced in July, 1974 when the Erhard staff returned to the

institution with a NBC TV crew to film a special post-graduate seminar on sharing experiences after the training. As a result of inmate testimonials, the Warden of the institution requested further evaluation of the 1974 training.

In this second effort to determine the validity of statements emitted by those inmates who participated in the training, the institution's mental health staff interviewed case managers and unit officers who supposedly were well acquainted with each of the ten inmates randomly selected from among those inmates who fell into Groups I, II, or III (Moss, Tufte & Anderson, 1974). Without mentioning the est training, a mental health staff member asked each casemanager or officer the following four questions:

1. Is (the inmate) generally regarded as: relaxed - average - tense?
2. Is (the inmate) able to express himself: well - average - poorly?
3. Does (the inmate) show much insight into himself: good - average - poor?
4. How would you rate (the inmate) in terms of intelligence: bright - average - below normal?

The results did not favor any one group: Group I (completers) were seen as the most verbally expressive; Group II (dropouts) supposedly displayed the greatest insight into themselves; while Group III (nonparticipants) were seen as more relaxed and more intelligent than were either of the other two groups. The small size of the sample, however, negates the possibility of making statements or inferences.

In addition to staff interviews, psychological and behavioral data from each inmate's prison file were collected for those in each of the three groups (N=30). Specifically, the data collected was analyzed to determine whether the inmates who participated and completed the est training differed from those who did not complete or did not volunteer for

the training. The categories selected and means for each group were as follows:

| | | Group I (N=10) | Group II (N=10) | Group III (N=10) |
|---|---|---|---|---|
| 1. | Intelligence derived from the BETA: | 103. | 104. | 107. |
| 2. | Highest grade completed prior to incarceration: | 11.50 | 10.7 | 10.40 |
| 3. | Classes presently enrolled (yes-no) | .70 | .70 | .40 |
| 4. | S.A.T. median score (achievement in grades | 8.33 | 8.03 | 8.05 |
| 5. | Job assignment (1-3 in terms of responsibility; one being least) | 1.90 | 1.70 | 1.90 |
| 6. | Self-control plus interpersonal relationships (taken from the RAPs Need Category | 2.20 | 3.20 | 3.55 |
| 7. | Membership in different inmate groups | 2.20 | .50 | 1.10 |
| 8. | MMPI Social Introversion Scale | 49.80 | 48.60 | 51.00 |
| 9. | Psychotropic drugs taken (yes-no) | .40 | .40 | .00 |
| 10. | MGT/MSA (yes-no) | .40 | .20 | .50 |
| 11. | Number of minor shots | 1.90 | 1.00 | 3.00 |
| 12. | Number of major shots | .80 | 1.10 | 2.10 |
| 13. | Drug problem as shown on BP-8 | .50 | .70 | .70 |

Unfortunately, because of the low number of persons in each Group, none of the categories turned out to be significant when tested statistically. However, the authors noted there was a tendency for Group I (participants) to be characterized in comparison with the other two groups, as having completed a slightly higher grade level than the other two; to have enrolled in a greater amount of inmate self-help activities; to have less need in terms of Self-Control and Interpersonal need categories; and to have received fewer major reprimands (items 2, 6, 7, 12).

The conclusions submitted by the authors to the Warden of FCI, Lompoc were:

1. The results were ambiguous in terms of statistically significant differences between the three groups but this was expected because of the low N sampled.

2. Similarly, not much was accomplished differentiating between the three groups by taking an opinion survey of those staff members who would supposedly know the inmates best.

3. In terms of the selection procedure, Group I did not turn out to be more intelligent than the other two groups nor were they judged to be more relaxed; however, they were somewhat better educated, more verbally expressive, tended to be in a greater number of inmate organizations, suffered less major reprimands, and showed greater self-control.

4. This type of ex post facto analysis is not as an effective analysis as collecting data on a pre and post basis. More meaningful information could have been gathered if Mental Health had been given responsibility for evaluation prior to the est experience and had been able to assign inmates at random to treatment and control groups (at least 30 inmates per group) in order to distill out the factors which produced change.

5. Finally, similar to other established education-mental health programs, it is evident that est is a beneficial experience, especially for some inmates as noted in 3 above.

Another pilot study involving est training at FCI, Lompoc was a Master's Degree thesis completed by Justine Riskind of San Francisco State University in 1975 (Riskind, 1975). Of the original 53 inmates who completed the est training at the Lompoc facility in 1974, Riskind was able to study only 15 who were still in the institution and only 13 "dropouts" who were still available. Although an incomplete sample, Riskind found that while more Blacks than Whites proportionally enrolled in the training, a greater proportion of Blacks dropped out before completing the program. She also noted that the completers, on the average, had had more years of formal education ($p = < .05$). Outcomes associated with training were not evaluated.

And, finally, Moss (1979) did a recidivism study of the 1974 population which compared graduates and dropouts. As noted, of the 160 inmates who originally signed up for est training, only 53 graduated. Using data provided by the National Crime Identification Center, Moss analyzed the reincarceration data for the inmates during a four-year period. The data for these analyses are shown below:

| | Reincarcerated | Not Incarcerated |
|---|---|---|
| est Graduates | 20 | 33 |
| est Dropouts | 42 | 65 |

A $Chi^2$ (.003) was far from being statistically significant, indicating graduates and dropouts did not differ significantly on this variable. However, their recidivism rates of 40 and 30 percent respectively compares quite favorably to the overall recidivism rate for this age group of 50 percent (Bureau of Prisons Annual Report, 1978). Contrary to Riskind's report, Moss found Blacks did not differ from Whites relative to dropout rates: They dropped the course in almost the same proportions as did the Whites.

Subsequent to the est training being conducted in 1976 at San Quentin, two articles appeared in the est organization's The Graduate Review. The first was written by Gary Clarke (1976), an est staff member and the second by Michael Keller (1977), the San Quentin Training Officer. While the former article was primarily a narrative, one highly positive about the training, in contrast, Keller's was data-based. As part of a study commissioned by the California Department of Corrections, Keller administered questionnaires and conducted personal interviews with 15 inmates who had gone through the training. The conclusions of the study were that these inmates took "greater personal responsibility for their lives" and the training was valuable in "fostering individual growth." Regarding

racial attitudes, which have high priority within prisons, the est inmates were "significantly more open, tolerant. . .and held people in higher esteem" than those in the control group who were enrolled in the prison college program. Again the small size of the sample and the fact that the study consisted of retrospective self-reports were noted by the author as factors possibly affecting the outcomes.

Both pre- and post-administrations of the California Personality Inventory and an inventory measuring locus of control (Social Reaction Inventory) were employed to assess possible psychological changes among the inmates who completed the est training. Although no significant changes were found on these dimensions, staff members reported "a positive change in some of the graduates." Thus, the staff concluded that the psychological tests used were inappropriate for detecting the changes which may have occurred.

In a private communication, the Chief Psychologist of the Leavenworth Federal Penitentiary, reported that his staff was unable to establish any objective changes on the pre- and post-course administration of the California Psychological and Social Reaction Inventory (see above), despite the experiential impression that the est training was impactful. In retrospect, he believed that their battery was too long and the instruments lacked sensitivity on really important dimensions.

In summary, few of the prison studies to date addressed to the est training have been other than post-hoc self-reports of inmates who have taken the training. Further, those studies that have been data-based, have employed samples much too small for making inferential statements of significance. Most have been descriptive non-experimental evaluations in which objective tests of hypotheses were not possible.

The fact that the statistical results of these studies failed to reach traditional levels of significance may not be a factor of the training itself. As pointed out by Moss et al., in their two evaluative reports, the small samples utilized were due to time restrictions and lack of funds being available to conduct any thorough evaluation of the training. Also, as pointed out in their summary statement, the evaluations were formulated and conducted after the training was completed.

What is needed is (1) a study having sample sizes large enough so that confidence can be had in the findings and (2) that the study be developed, hypotheses made, dependent variables specified, and ways of collecting and analyzing the data agreed upon before the training is implemented (Campbell & Stanley, 1963). That is, if a program has considerable merit for promoting specific changes in behavior, these changes ought to be able to be specified before the training begins and the criterion variables to be measured to determine whether these changes which occur need to be stated in performance terms. The present study was designed with these factors in mind.

To a large extent this will be an analysis of est through behavior terms, as laid down in a paper by Baer and Stolz (1978). Their article presents the difficulties that est presents to behaviorally oriented psychologists and is best summarized in a concluding paragraph from their paper:

> The more practical and realistic an outcome study, however, the more distant it seems to be from the central goals espoused by the est organization. Even so, we do not believe that outcome studies of est are useless or of little value. As argued at the outset of this paper, the fact that est's central values and intentions are not psychotherapy, behavior change, or "betterment" per se does not disbar it from being considered from just those points of view; but it does mean that any study from those points of view will be of little relevance to the est organization, to any of its graduates who did indeed derive from it the "aliveness and satisfaction" outcomes that est cites as central, or to any prospective trainee seeking exactly that class of private experience (p. 68).

## Footnotes

1. For those interested, a biography of Erhard's life (Bartley, 1978) has recently been published. It reveals a frank and at times glowing detail of Erhard's early life and the elements that contributed to the development of the est training and the est organization.
2. Data obtained from the Graduate Division of est, October, 1979.
3. Babbie, however, is a graduate of est.

# Chapter II

## Experimental Design and Procedures

The primary goal of this monograph was to evaluate the effects of Erhard Seminar Training (est) on the psychological, physiological, and behavioral outcomes of inmates incarcerated in a federal correctional institution. The training consisted of the standard est procedures conducted by regular est staff over a period of four days (two successive days one week and two the next week).

### Design

The study employed a Solomon Four-Group Design highly recommended for human subject research (Campbell & Stanley, 1963). Since all subjects in the four primary groups utilized in such a design were volunteers (see Figure 1) a no-treatment control group was added consisting of subjects who did not volunteer for the training and, at a later interview session, indicated that they did not wish to participate in the est training.

Figure 1 shows the procedures used in selecting subjects and randomly assigning them to treatments. As indicated in Figure 1, two of the groups of volunteers were both pretested and posttested, thus making it possible to control for test effect as well as to compute comparisons among the groups on baserate data collected prior to initiating the training. Two groups, one receiving est and one receiving scholarships for future est training, were posttested only. This applies only to the psychological and physiological data since behavioral data that are routinely collected and recorded by the institution, e.g., incident reports and work evaluations, were available for all subjects and controls both pre and post were analyzed. The no-treatment non-volunteer group was pretested but could not be posttested due to a lack of cooperation by these subjects.

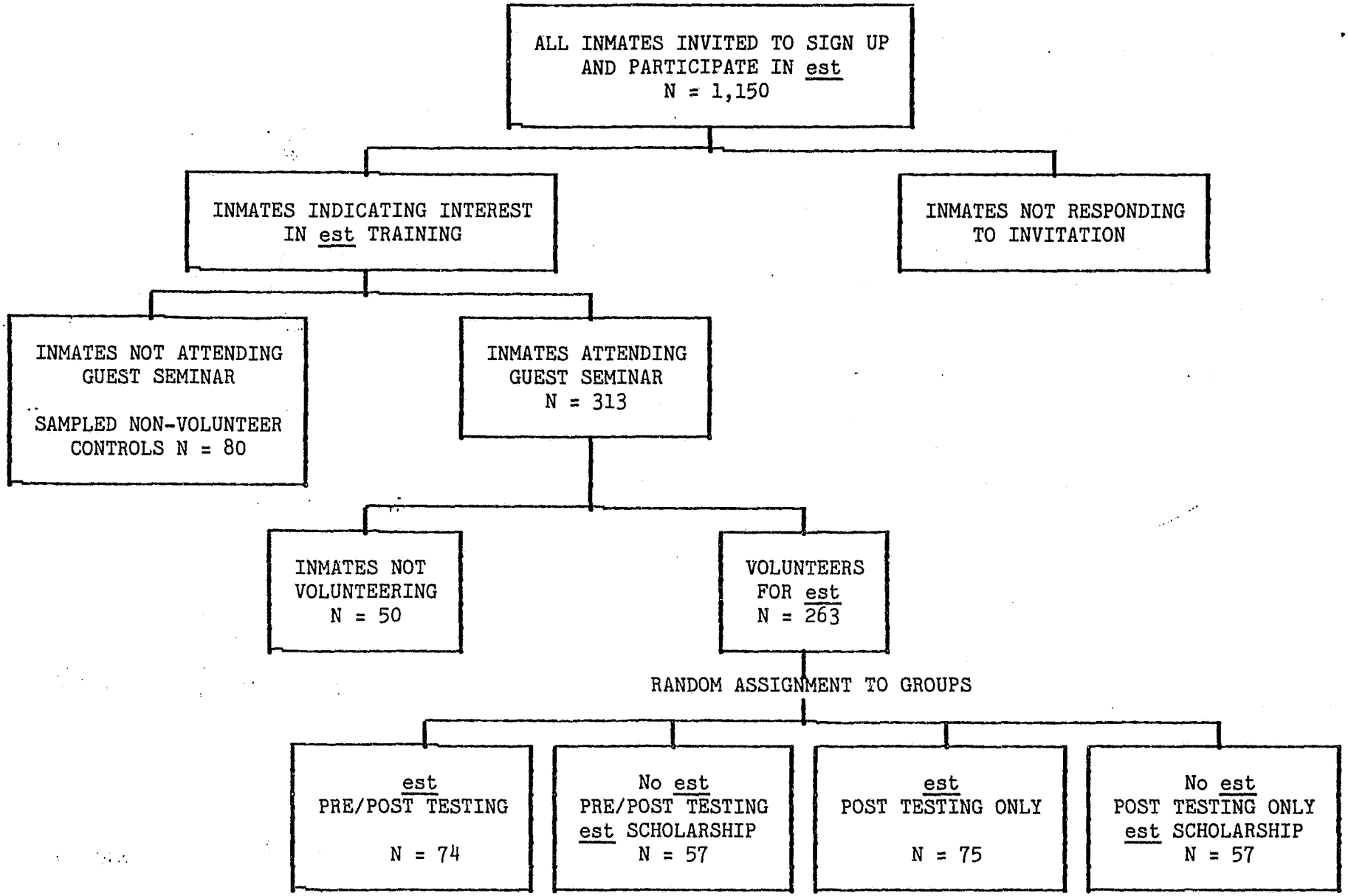



FIGURE 1. PROCEDURES EMPLOYED IN SELECTING AND ASSIGNING SUBJECTS TO GROUP

Setting

The study was conducted at the Federal Correctional Institution at Lompoc, California. At the time of the study, the institution was a medium security institution primarily for young adult males. As a correctional institution, the objective of the facility was to provide programs that assist inmates so that they might cope more effectively in society after their release. Thus, opportunities for remedial education, high school and college degree courses, and a variety of vocational and personal skills development programs were available to all inmates.

Subjects

As indicated above, all 1,150 inmates at the Lompoc Federal Correctional Institution were invited to attend a guest seminar conducted at the institution by est staff. Several announcements of the guest seminar were posted in conspicuous places around the institution. This guest seminar explained some of the objectives of est and the responsibilities required for those participating in the training. It was presented in the institution auditorium by an est trainer and regular est volunteer assistants from the community. Attendance was voluntary; 453 inmates attended. A large portion of time was devoted to answering inmates' questions about the training. The guest seminar was presented 41 days prior to the pre-training session. As is standard in est training, all inmates were told that if they were presently in psychotherapy or had histories of mental problems they should not sign up for the program. It was also made known that only 150 persons could be accommodated in the training and the remaining volunteers would be awarded scholarships which would ensure free enrollment in a subsequent est training either inside the institution or, if released, in the community. Following this guest seminar, each inmate in attendance was asked to complete a card used by est

indicating his degree of interest in participating in the est training. The six options listed on the card were:

_____ 1). I am excited by and want to take the training.

_____ 2). I would like to take the training.

_____ 3). I think I want to take the training and I have considerations.

_____ 4). I don't know if I want to take the training.

_____ 5). I don't want to take the training and I have some positive feelings about it.

_____ 6). I definitely don't want to take the training.

The bottom of the card also included the following statement which they signed:

PERSONAL AGREEMENT

I would like to participate in the project to assess the est program even though I may not be in the training but asked to accept a scholarship.

I agree to complete 3 sessions of paper-and pencil personality inventories plus simple physical measurements such as the hand temperature measurement.

I understand that the inventories and physical measurements will be kept confidential and that the results will not be identified with my name by the University of California to either est or to F.C.I. The results will be shared with me, even though I may have left the institution.

_____ _____
(signature) (unit)

_____ _____
(number) (date)

Those 313 inmates who signed the form requesting est training were randomly assigned to one of four groups: 1) est pre and posttest, 2) scholarship pre and posttest, 3) est posttest only, and 4) scholarship posttest only. Subsequently, all inmates who volunteered for est received a letter from est which indicated the particular group for which they were selected,

i.e., to receive est or to be in the scholarship group. Those inmates who indicated that they did not wish to participate in the training or in the testing required for obtaining a scholarship were at this point eliminated from the study. They were, of course, allowed to participate in any other ongoing self-help programs being offered in the institution.

In order to determine whether inmates who sought est differ psychologically and behaviorally from those who did not, 80 inmates were randomly selected from those in the prison population who did not sign up for the training. Each of these subjects was interviewed individually by one of the authors and asked to help evaluate the effects of the training by taking three psychological and four physiological (biofeedback) tests. Those volunteering to assist in the evaluation signed the following agreement:

> I would like to participate in the project to assess the est program even though I will not be in the training.
>
> I agree to complete 3 sessions of paper-and pencil personality inventories plus simple physical measurements such as hand temperature.
>
> I understand that the inventories and physical measurements will be kept confidential and that the results will not be identified with my name by the University of California to either est or to F.C.I. The results will be shared with me, even though I may have left the institution.
>
> _____ _____
> (signature) (unit)

Experimental Treatment

The experimental treatment consisted of the standard est training conducted by two male regular est staff trainers, one of whom had prior experience in conducting the training in correctional settings. In addition, an institution psychologist, himself an est graduate, responded to those situations indigenous to the prison setting. Due to security and

other administrative concerns of the institution staff, minor modifications in the training schedule were made, e.g., day of week and time of day. Basically, the program consisted of the standard est training materials presented verbally by the trainers. The training involved the didactic presentation of life principles, processes involving relaxation, guided imagery, and introspection (usually performed with eyes closed) and verbal sharing of personal experiences. Two male est trainers were used.

Data Groups[1]

The est-treatment group was divided into "completers" and "dropouts" for data analyses because so many subjects dropped out of training. Thus the following groups were used for comparisons:

1) est volunteers
   a) assigned to wait-controls (est Controls)
   b) assigned to treatment (est Treatment)
      1. treatment completers (Completers)
      2. treatment dropouts (Dropouts)
2) non-volunteers (Controls)

Evaluation

Three principal categories of measurements--psychological, physiological, and behavioral--were used to evaluate the subsequent effects of the est training.

Psychological. The instruments used to evaluate attitudinal and personality changes included the Minnesota Multi-Phasic Personality Inventory (MMPI), the Semantic Differential, and the Self-Evaluation Questionnaire (State-Trait Anxiety Test). All 25 scales of the MMPI were used.

The Semantic Differential in contrast to the MMPI, is not a psychological test per se but rather a highly generalizable operation of measurement which has been adapted to measure a variety of psychological outcomes.

Its originators (Osgood, Suci, & Tannenbaum, 1957) postulated a geometrical model in the form of a semantic space defined by logical opposites. Independent dimensions of this space, representing the ways in which human beings make meaningful judgments, were identified by factor analysis. The generality of this factor structure has been tested over a period of 20 years by varying subject populations, concepts judged, type of judgmental situation, and the factoring methods used in analyzing the data. The measuring operation or semantic differential first identifies polar adjectives as being representative of the major dimensions along which meaningful judgmental processes vary; these have a high coverage of meaning on one factor and a negligible amount on the others. The two polarities of each adjective are used to represent the two opposite end points of seven-point scales. In the present study, nine polar adjectives were used: three represented the Evaluative Factor (valuable-worthless, relaxed-tense, and meaningful-meaningless), while two other sets each represented the Potency (large-small, weak-strong, and deep-shallow) and Activity Factors (slow-fast, active-passive, and cold-hot). In practice, an individual judges a particular concept, e.g., MYSELF AS I WANT TO BE against a pair of polar adjectives. Judgments result in the successive allocation of a concept to a point in a multi-dimensional space. In this manner, changes in the meaning of a concept over time, the subtle differences between two or more concepts, and the individual differences in the meaning of a single concept may be quantitatively represented. For the <u>est</u> evaluation, 12 different concepts were chosen for measurement, e.g., MYSELF AS I AM NOW, MYSELF AS I'D LIKE TO BE.

The Self Evaluation Questionnaire (Spielberger, Gorsuch, & Lushene, 1970) is comprised of separate self-report scales for measuring state and trait anxiety. The trait scale consists of 20, four-point, forced-choice

statements indicating how subjects generally feel while the state scale consists of 20, four-point, forced-choice items indicating how subjects feel right now. For both scales, the higher the score the greater the state or trait anxiety.

Physiological. The physiological measurements employed were principally biofeedback responses recorded over a ten-minute period while the subject was exposed to a standard stimulus situation, i.e., a tape recording which said:

> Welcome! We genuinely appreciate your cooperation in helping us to evaluate the effects of the Erhard Seminar Training at F.C.I. Today we are interested in acquiring some physiological measures of how you respond to a brief period of nonactivity. The equipment we are using will allow us to monitor your rate of breathing, hand temperature and skin resistance. The instruments will not be doing anything to you. They simply detect, amplify and record the activity level of your nervous system while you are at rest. The attendant will now attach three physiological sensors to you. Once the sensors have been adjusted, please recline in your chair and sit quietly during the measurements. The entire process will take about 10 minutes.
>
> 10 MINUTE INTERVAL
>
> The measurements are now completed. Please return your chair to an upright position. The attendant will remove the sensors from your hand and chest. Thank you for your cooperation. Please leave quietly and without comment.

Responses monitored and recorded on a polygraph were four measurements commonly used in biofeedback research: hand temperature, basal skin resistance, galvanic skin resistance and respirations per minute. The instruments used for this purpose consisted of a polygraph amplifier and recorder combined models 76100 - 76405 produced by Lafayette Electronics.

Behavioral. Measurements routinely collected and recorded by institutional staff which were used to measure health and psychological outcomes of the training included the following:

1. Self-initiated hospital sick-call visits
2. Self-report histories of drug usage

3. Urine analyses taken either at random and for cause
4. Personal Adjustment Ratings (completed by housing unit staff)
5. Work Performance Ratings (completed by staff job supervisor)
6. Educational achievement information (e.g., amount of formal education achieved prior to incarceration, number of formal courses enrolled in at the institution, academic achievement test scores, intelligence quotients)
7. Custody levels and changes in custody
8. Meritorious service awards (including token salary)
9. Honor unit residence
10. Overnight and day furloughs
11. Incident reports (reports of rule infractions filed by staff)
12. Administrative remedies (grievances submitted by inmates)
13. Segregation unit commitments

In addition, a variety of demographic data were also analyzed to determine whether those inmates who specifically sought est training differ significantly from those who did not volunteer to participate. Examples of these variables include criteria such as marital status, total time incarcerated, age at first arrest and number of months of work experience.

Assessment periods. Assessment data other than self-report measures such as the MMPI and Semantic Differential psychological measurements were collected for three time periods. The first period (baserate) spanned three months prior to the est training. The second period (post) spanned three months after the est training terminated. The third period or second followup period spanned 12 months after the training ended. As such, periods two and three are not independent data. In addition, special arrangements have been made with the Federal Bureau of Prisons' Central Office to provide recidivism data on all subjects taking part in the study

five years after release from prison. These data are still being collected and will be reported in a subsequent writeup.

Data Recording and Analysis

All testing was conducted by trained graduate students in Counseling Psychology from the University of California, Santa Barbara; none of them had taken est training nor were aware of the treatment groups to which subjects had been assigned. Five percent of the psychological test data which were hand scored (Semantic Differential and the State-Trait) were reassessed for reliability purposes. All coefficients were above .90 with most being a perfect 1.0. Data routinely collected by institutional staff, coded and stored on computer disks by the Federal Bureau of Prisons were simply accepted as being reliable and valid due to the fact that further reassessment was impossible.

Statistical analysis. Primarily, analysis of variance, chi-squares, and t-ratios were used in the analysis of the data. MANOVAS were specifically not used due to inability to answer the specific questions for which the study sought answers. Although cognizant of some of the possible limitations of using the Duncan New Multiple Range Test for post hoc analyses for which significant F ratios were obtained, this test was employed primarily for pragmatic reasons (all data and computer programs for the study were processed using the SAS computer package and Duncan's is the only post test available in SAS; funds were not available for additional analyses). Analyses of covariance were used when sufficient significant differences occurred among the experimental groups on pre-test comparisons.

It should also be pointed out that some analyses may include non-independent data in that both pre-post and post-post comparisons among the groups were carried out on several variables. Further, the authors are also cognizant that the study employed numerous dependent variables in each

of the three main areas of measurement thereby possibly inflating the .05 alpha level selected for determining statistical significance. More conservative estimates, of course, if desired by the reader can be obtained merely by dividing the alpha level selected by the appropriate number of tests employed on those data for which non-independence or chance factors have been influenced.

Footnote

1. Members of the FCI staff were also invited to participate (see Appendix A).

## Chapter III

## Characteristics of Subjects

Prior to analyzing the psychological, physiological and behavioral outcomes, a variety of demographic data were analyzed to ascertain the characteristics of inmates who 1) volunteer versus those who do not volunteer for such training and 2) those who complete versus those who drop out of training. Numerous types of data are routinely collected and filed by the Federal Bureau of Prisons such as age, type of commitment, prior arrests and intellectual level. For these variables no hypotheses were formulated for testing. The data were examined only to determine characteristics of the various groups involved in the study. However, inferential statistics were applied to those variables for which comparisons among the various groups were appropriate. Although the original Ns for the three primary treatment groupings were quite large (est Trainees = 149, est Controls = 114, and Non-volunteers = 80), the number of subjects used for comparisons was often less due to missing data in the Bureau of Prisons computerized file. Because over 60 percent of those volunteering for the training dropped out prior to the final session, this group was compared with the Completers, est Controls and Non-volunteers. The fact that they were not randomly assigned to the dropout group constitutes a bias in those analyses for which random assignment is a necessary assumption. However, after consultation with statisticians, it was decided that the dropouts constituted a very meaningful group and more was to be gained than lost by including them in the parametric as well as non-parametric analyses. Further, it should be pointed out inmates are often transferred from institution to institution for a variety of security and personal considerations. Inconsistencies in data collecting and filing quite often occur both within and between institutions due to complexities involved in

ensuring quality control in a system as large as the Bureau of Prisons. Subjects with incomplete data in any one area of evaluation were eliminated only for those specific analyses, thus Ns differ among the various evaluations.

Age

The 214 inmates who sought the est training and for whom these data were recorded and available from the Central Office computer files ranged in age from 17 to 34 and on the average were 24.77 years of age. The 36 Non-volunteer controls ranged in age from 20 to 29 and had a mean age of 23.75. The average age for those in the individual treatment groups per se was, as follows:

| | N | Mean | Range |
|---|---|---|---|
| Those who completed the training (Completers) | 48 | 24.56 | 18-29 |
| Those who dropped out of the training (Dropouts) | 65 | 24.86 | 19-34 |
| Those assigned to scholarships (est Controls) | 99 | 24.81 | 17-34 |
| Those not desiring training (Non-volunteer controls) | 36 | 23.75 | 20-29 |

Age at First Arrest

Because age at first arrest has been found to be correlated significantly with patterns of violent behaviors, this variable was also evaluated separately. Thoe volunteering for est were, on the average, 15.87 years old when they were first arrested while the Non-volunteers were 16.39. This difference was not statistically significant nor were comparisons for age at second commitment (est volunteers = 18.44; Non-volunteers = 17.67) or for total number of commitments before or after 18 years of age.

Number of Prior Arrests

The average number of arrests prior to the present offense for which each inmate was incarcerated was 6.67 (N = 260) with a range of 0 to 52.

The Non-volunteers had significantly more prior arrests than those volunteering for the training (8.87 versus 6.31, respectively), $F(1,253) = 3.72$, $p < .05$. In contrast, no differences were found among the four treatment groups. Thus, in terms of the number of prior arrests, the Completers, Dropouts, est Controls, and Non-volunteers did not differ significantly from each other.

Intelligence

The average intelligence quotient on a modified Army Beta I.Q. test for the Volunteers was 104.95 and for the Non-volunteers 105.19. When the individual treatment groups were compared, it was found that the Completers, on the average, had a significantly higher I.Q. (107.8) than did the Dropouts (101.44), $F(3,229) = 3.21$, $p < .02$. However, the Completers also had achieved a higher level of formal education (11.03 years) than the Dropouts (10.21).

Work Experience

The mean number of months of work experience prior to incarceration for the Volunteers was 23.45, whereas that for the Non-volunteers was 15.39. This difference resulted in a significant F ratio, $F(1,207) = 3.83$, $p < .05$. This suggests that inmates who desire to take est training are more likely to have more extensive histories of work experience than those who specifically choose not to enroll. Interestingly, it was the Dropouts who, as a group, had had the greatest amount of work experience. Although not statistically different from each other, the average number of months of work experience for each group was as follows:

| | N | Mean |
|---|---|---|
| Dropouts | 47 | 28.17 |
| Completers | 41 | 22.22 |

| | | |
|---|---|---|
| est Controls | 86 | 21.85 |
| Non-volunteers | 33 | 15.39 |

Racial Characteristics

Race/ethnic information are presented in Table 1. As shown in the table, the largest percentage of each group was Caucasian followed by Black. Of the 113 inmates originally beginning training for which racial identification was available, 66 (58.4%) dropped out. Proportionately, 60% of the Whites and 56.8% of the Blacks terminated training prior to the last session. A chi-square test of significance for this difference did not reach statistical significance ($p < .05$). Data for this analysis is presented in Table 2.

Months Incarcerated

The average number of months incarcerated at FCI, Lompoc prior to the est training, did not vary significantly among the treatment groups: Completers served 14.5 months; Dropouts served 11.5 months; and est Controls served 13.1 months. An examination of the distribution of months served in six-month blocks also yielded no differences by group.

Psychological Diagnosis

Each inmate undergoes a psychological evaluation by a member of the mental health staff upon his initial incarceration at the institution. The psychological assessment is based almost entirely on clinical observations and consists primarily of a general identification of psychological problems. This occurs because actuarial data (e.g., MMPI scores or inmate records) are not avaialble at the time intake diagnosis is made. Relative to the present study, a chi-square test indicated that no differences existed among the groups on the frequency of psychological problems recorded. Among the Volunteers, 56.84% (N = 54) had a diagnosis of "no psychological problem," while 43.16% (N = 41) had some type of psychological

TABLE 1

RACIAL DISTRIBUTION OF SUBJECTS

| GROUP | WHITE N | WHITE % | BLACK N | BLACK % | OTHER N | OTHER % |
|---|---|---|---|---|---|---|
| est VOLUNTEERS | 130 | 60.74 | 72 | 33.64 | 12 | 5.61 |
| COMPLETERS | 28 | 59.57 | 16 | 34.04 | 3 | 6.39 |
| DROPOUTS | 42 | 63.64 | 21 | 31.82 | 3 | 4.55 |
| est CONTROLS | 60 | 59.41 | 35 | 34.65 | 6 | 5.94 |
| NON-VOLUNTEERS CONTROLS | 25 | 69.44 | 5 | 13.89 | 6 | 16.67 |

TABLE 2

NUMBER OF MONTHS INCARCERATED AT FCI, LOMPOC

PRIOR TO est TRAINING

| MONTHS | COMPLETERS N | COMPLETERS % | DROPOUTS N | DROPOUTS % | est CONTROLS N | est CONTROLS % |
|---|---|---|---|---|---|---|
| 1 - 6 | 10 | 23.81 | 31 | 52.54 | 32 | 38.55 |
| 7 - 12 | 7 | 16.67 | 10 | 16.95 | 20 | 24.10 |
| 13 - 18 | 15 | 35.71 | 8 | 13.56 | 10 | 12.05 |
| 19 - 24 | 5 | 11.90 | 3 | 5.08 | 12 | 14.46 |
| 25 - 30 | 1 | 2.38 | 2 | 3.39 | 4 | 4.82 |
| 31 - 36 | 3 | 7.14 | 2 | 3.39 | 1 | 1.20 |
| OVER 36 | | 2.38 | 3 | 5.08 | 4 | 4.82 |

concern noted. Those in the est-Control group had 57.50% (N = 46) and 42.50% (N = 34) in these two respective categories. Similarly, there were no significant differences between the est Completers and the est Dropouts.

Drug Histories

Data on drug use was coded into four categories: 1) none or marijuana only, 2) drugs other than marijuana, e.g., heroin, cocaine, hashish, 3) alcohol only, and 4) both alcohol and drugs other than marijuana. A chi-square test yielded no significant differences among the est Completers, Dropouts, and est Controls, for any of the four responses. The data for these analyses are shown in Table 3. Interestingly, only 3.6% of the est trainees (Completers and Dropouts combined) and 3.75% of the est Controls reported using alcohol but no other drug. Chi-square comparisons of the type of drug used most among the est Completers, Dropouts, and est Controls did not result in statistical significant differences thus suggesting that prior to the est training, these three groups were comparable on this dimension. However, because the Ns were below 5 in four of the 12 cells, the chi-square may not be a valid analysis.

Other Variables

Numerous other background data were analyzed to determine whether inmates in the various groupings differed significantly on these variables. For the following criteria, no significant differences were found between the Volunteers and Non-volunteers nor among the Completers, Dropouts, est Controls, and Non-volunteers:

1. Length of commitment
2. Marital status
3. Total number of commitments over 6 months
4. Number of federal, state or local community commitments of under or over 1 year while less than or older than 18 years of age.

TABLE 3

DRUG USAGE PRIOR TO INCARCERATION

| TYPE OF USE | COMPLETERS | | DROPOUTS | | est CONTROLS | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| None or Marijuana Only | 11 | 26.19 | 26 | 44.33 | 18 | 22.50 |
| Drugs Other Than Marijuana or Alcohol | 23 | 54.76 | 29 | 48.33 | 50 | 62.50 |
| Alcohol Only | 3 | 7.14 | 1 | 1.67 | 3 | 3.75 |
| Drugs and Alcohol | 5 | 11.90 | 3 | 5.0 | 9 | 11.25 |

5. Longest time for any one sentence served in prison
6. Use/non-use of co-defendants in crime(s) for which commitment resulted
7. Educational achievement test scores
8. Amount of "good time" accrued or possible
9. Amount of time left to serve before eligible for parole or mandatory release
10. Total amount of time incarcerated to date

Because not one of the groups differed significantly on any of the ten areas cited above, the respective means, frequencies, and statistical outcomes are not reported here. However, these data may be obtained by contacting the first author.

Summary

Inmates who volunteered for est differ little from Non-volunteers with respect to the background variables examined.

est Volunteers on the average had significantly more work experience and fewer prior arrests than did the Non-volunteers. In addition, the Completers were significantly more intelligent and had higher educational achievement scores than the Dropouts. No differences were found between est Volunteers and Non-volunteers or among the est Volunteers (Completers, Dropouts, and est Controls) on the numerous other variables presented above.

On most of the background variables, mental health factors are not involved except that of Psychiatric Diagnosis. In this particular institution, because of a shortage of staff, most of these clinical diagnoses were made by graduate counseling psychology students oriented in empiricism and who heartily dislike classifying people into "pigeon holes." Thus there is a possibilitty that had trained staff done the intake interviews, something more definitive might have been found. This is simply a conjecture, but one example of how the variables may have been confounded.

Also of interest is the racial breakdown; the data do suggest that est can be made amenable to Blacks since their dropout rate was considerably below that of the Whites by a 1:2 ratio (32% versus 64%). This would not be readily inferred from data from the free society in that most est participants come from White middle-class, well-educated backgrounds.

# Chapter IV

## Psychological Outcomes

As indicated in Chapter II, the Minnesota Multi-Phasic Personality Inventory, the Semantic Differential, and the Self-Evaluation Questionnaire (State-Trait Anxiety Test) were used to measure psychological differences among the various experimental groups before and after the est training. Because the Non-volunteers were not tested after the training was completed (most refused or simply did not respond to call-outs for testing), post analyses on the psychological data involved only the Completers, Dropouts, and est-Controls.

### MMPI

Pretreatment differences among the three randomly assigned groups--est-Treatment (Completers and Dropouts), est-Control, and Non-volunteer Control--were examined first. A comparison of the mean number of pretest deviant MMPI scale scores (<30 or >70) yielded no differences. In addition, scale-by-scale comparisons yielded differences only on the Social Responsibility Scale (RE), $F(2,142) = 3.21$, $p < .04$, where Duncan's New Multiple Range Test found the est-treatment group differed from the Non-volunteer Controls ($p < .05$). The mean pretest scale scores are presented in Table 4. Similar results were obtained when the est-treatment group was divided into Completers and Dropouts. No differences among the groups (Completers, Dropouts, est-Controls, and Controls) were found for any of 25 scales. Indeed, group differences on the RE scale were not significant when the est-Treatment group was divided into Completers and Dropouts. Thus, given the large number of dependent variables examined for the MMPI, the single difference found could be attributed to chance variables.

Posttest (3 months after training). Posttreatment comparisons were made among the Completers, Dropouts, and est-Controls on the number of

TABLE 4

AVERAGE MMPI SCALE SCORES: PRETEST

| SCALE | est-TREATMENT (n = 61) | est-CONTROLS (n = 45) | NON-VOLUNTEERS (n = 37) |
|---|---|---|---|
| L | 54.05 | 49.91 | 52.54 |
| F | 65.34 | 67.37 | 71.41 |
| K | 55.52 | 52.61 | 52.97 |
| HS | 55.79 | 55.13 | 56.78 |
| D | 57.84 | 59.02 | 61.03 |
| HY | 59.16 | 55.89 | 58.14 |
| PD | 73.06 | 71.11 | 73.39 |
| MF | 61.89 | 58.26 | 58.78 |
| PA | 59.33 | 61.39 | 63.78 |
| PT | 59.20 | 59.11 | 61.28 |
| SC | 66.54 | 66.61 | 73.00 |
| MA | 68.84 | 70.07 | 71.67 |
| SI | 49.87 | 49.61 | 51.97 |
| A | 49.77 | 51.15 | 52.78 |
| R | 48.84 | 47.39 | 47.95 |
| ES | 49.57 | 50.93 | 48.41 |
| LB | 57.28 | 55.93 | 53.73 |
| CA | 53.58 | 55.56 | 57.35 |
| DY | 49.03 | 51.24 | 52.00 |
| DO | 50.61 | 50.28 | 49.11 |
| RE* | 40.95 | 37.43 | 35.81 |
| PR | 53.52 | 55.80 | 56.54 |
| ST | 58.58 | 58.47 | 56.84 |
| CN | 54.18 | 57.32 | 57.51 |
| WB | 45.12 | 48.37 | 45.59 |

*$F(2,140) = 3.21$, $p < .04$

Duncan's New Multiple Range Test, $p < .05$

deviant MMPI scores obtained from testing three months after the training terminated. The mean number of such scores for these groups was: 2.32, Completers; 3.71, Dropouts; and 2.80, est-Controls. While the Completers had fewer deviant scores than did those in the other two groups, this difference failed to reach statistical significance.

Table 5 provides the mean MMPI scale scores and number of inmates in each group who agreed to be posttested. Significant F ratios were obtained for 17 of the 25 scales as compared to only 1 of 25 on the pretests. As indicated in Table 5 and Figures 2 and 3, Dropouts tended to be the group that differed most frequently from the other two groups. These differences were as follows:

1) The Dropouts had higher scale scores than both the est-Controls and the Completers on the scales measuring Depression, Hysteria, and Paranoia, and a lower score on Monomania.

2) The Dropouts, in addition, differed from the Completers on the Frequency, Psychasthenia, Schizophrenia, Anxiety, Low-Back Pain, Caudality, Dependency, Dominance, and Social-Status scales.

3) The Dropouts also differed from the est-Controls on Repression, Social Responsibility, and Emotional Control.

4) The Completers differed from the est-Controls on Psychasthenia, Conscious Anxiety, Ego Strength, Caudality, and Dependency.

5) On only one scale, Ego Strength, all three groups differed significantly from each other with the Dropouts exhibiting the lowest score and the Completers the highest score on this dimension.

It is interesting to note that the mean score of the Dropouts was higher than those of Completers and est-Controls on 15 of the 25 scales measured. These included: Lie, Frequency, Hypochondriasis, Depression, Hysteria, Masculine/Feminine, Paranoia, Psychasthenia, Schizophrenia, Social Introversion, Conscious Anxiety, Repression, Low-Back Pain, Caudality, and Social Responsibility. On the other hand, their mean scores were lower than those of the other two groups for six scales: Hypomania, Ego Strength, Dependency, Dominance, Social Status, and Emotional Control.

TABLE 5

AVERAGE MMPI SCALE SCORES: POSTTEST

| SCALE | COMPLETERS (n = 34) | DROPOUTS (n = 32) | est-CONTROLS (n = 55) | p < .05* |
|---|---|---|---|---|
| L | 54.44 | 55.66 | 52.45 | |
| F | 61.03 | 69.91 | 65.87 | 2 > 1 |
| K | 58.50 | 55.38 | 55.01 | |
| HS | 53.29 | 59.63 | 54.29 | |
| D | 53.62 | 63.03 | 56.40 | 2 > 1, 3 |
| HY | 55.06 | 60.03 | 55.53 | 2 > 1, 3 |
| PD | 68.24 | 68.38 | 70.62 | |
| MF | 59.62 | 61.00 | 60.04 | |
| PA | 56.50 | 65.44 | 60.20 | 2 > 1, 3 |
| PT | 54.38 | 61.63 | 59.35 | 1 < 2, 3 |
| SC | 59.82 | 71.00 | 66.80 | 2 > 1 |
| MA | 69.94 | 63.56 | 72.22 | 2 < 1, 3 |
| SI | 47.35 | 51.06 | 48.75 | |
| A | 43.53 | 49.75 | 48.47 | 1 < 2, 3 |
| R | 48.88 | 52.81 | 47.40 | 2 > 3 |
| ES | 58.97 | 47.31 | 53.18 | 1 > 3 > 2 |
| LB | 57.09 | 61.44 | 55.27 | 2 > 1 |
| CA | 47.41 | 54.72 | 52.60 | 1 < 2, 3 |
| DY | 43.71 | 49.09 | 49.40 | 1 < 2, 3 |
| DO | 55.71 | 49.84 | 53.38 | 1 > 2 |
| RE | 42.88 | 44.22 | 39.69 | 2 > 3 |
| PR | 49.94 | 50.56 | 53.20 | |
| ST | 62.32 | 57.44 | 60.97 | 1 > 2 |
| CN | 52.94 | 49.25 | 55.56 | 3 > 2 |
| WB | 44.15 | 44.44 | 46.35 | |

*Scales with both F ratios with $p < .05$ and with Duncan's New Multiple Range Test yielding differences at $p < .05$.

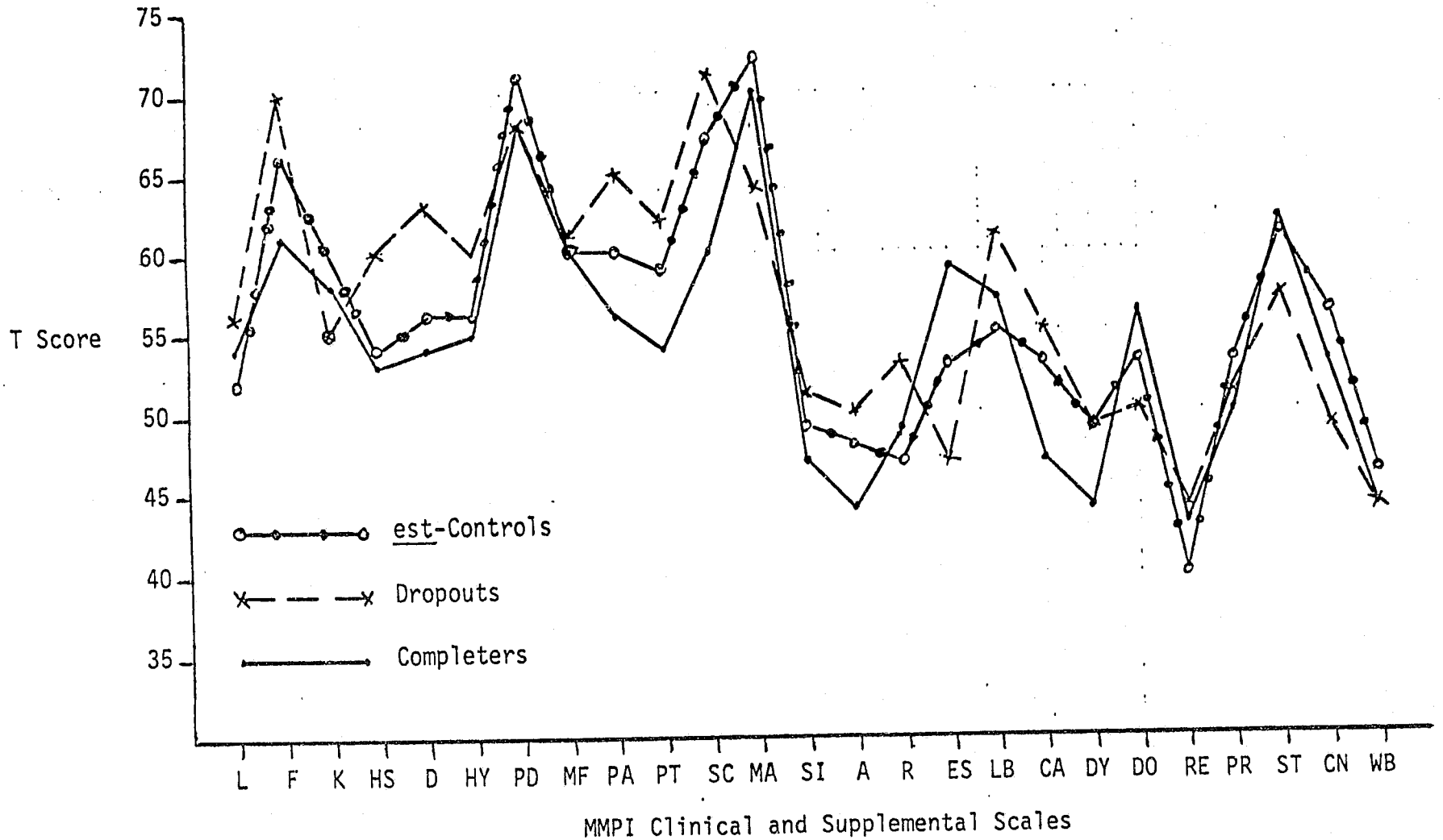



FIGURE 2: MINNESOTA MULTIPHASIC PERSONALITY INVENTORY T SCORES: POSTTEST

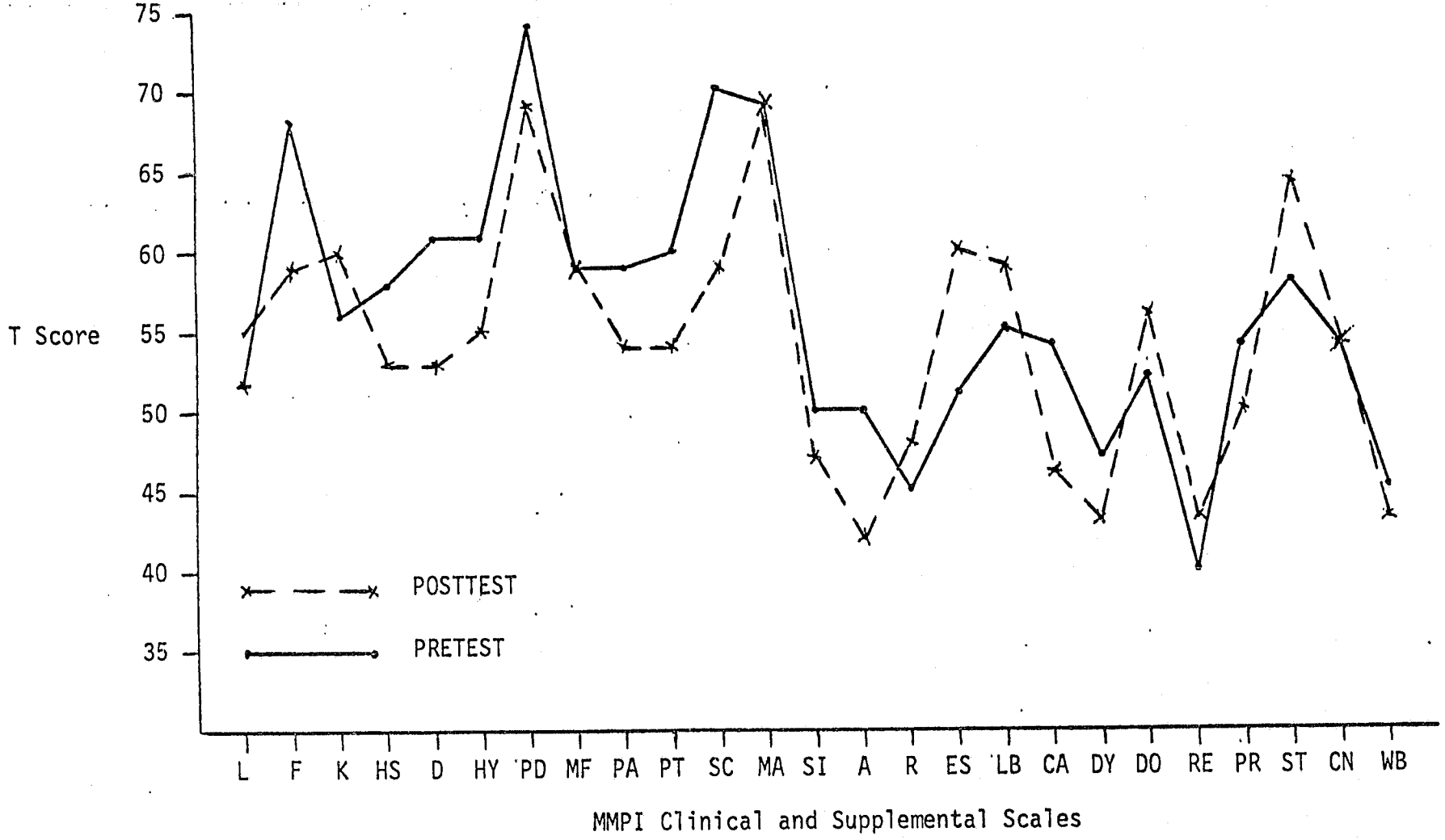



FIGURE 3: MINNESOTA MULTIPHASIC PERSONALITY INVENTORY PRE AND POST T SCORES FOR EST COMPLETERS

Thus, on only four scales (K--Correction, Psychopathic Deviant, Prejudice, and Worried Breadwinner) was the Dropouts' mean somewhere between those of the Completers and Controls. It is also of particular interest that the Completers differed from the est-Controls on only five of the statistically significant comparisons and that in all five cases, the Completers also differed from the Dropouts.

Pre-post analyses. Pretest-posttest analyses were computed to measure change over time, although it was recognized that analyzing the same data twice risks possible violation of non-independence of data thereby inflating the alpha levels used for determining statistical significance. Pre-post analyses were first analyzed by using change scores (post minus pre). A series of ANOVAS on the same three groups revealed significant F ratios for five scales: HY (Hysteria), $F(2,57) = 3.07$, $p < .05$; PT (Psychasthenia), $F(2,57) = 5.01$, $p < .009$; SC (Schizophrenia), $F(2,57) = 4.11$, $p < .02$; and ES (Ego Strength), $F(2,57) = 3.48$, $p < .03$; ST (Social Status), $F(2,57) = 3.89$, $p < .02$.

On these five scales for which significant Fs were obtained, the Duncan's Multiple Range Test revealed the following:

1) The Completers, on the average, scored 5.39 points lower on their post MMPI HY (Hysteria) scales compared with their pretest scores in comparison with the Dropouts and est-Controls which scored increases of 1.94 and 1.36, respectively.

2) On SC (Schizophrenia), Completers demonstrated a significantly greater decrease (-10.39) than did those in the est-Controls (.760). The mean change demonstrated by the Dropouts (-2.12) was not different from that of the other two groups.

3) On PT (Psychasthenia), both the Completers (-5.72) and the Dropouts (-4.35) demonstrated greater reductions than did those in the est-Control group.

4) The Completers also showed a greater increase (8.72) in Ego Strength (ES) than did those in the est-Control group (1.56).

5) The Completers increased their Social Status (ST) scores (5.39) more than did the Dropouts (-1.78).

Although analyses of variance of the pre-post change scores found overall differences were significant on only 5 of 25 MMPI scales, in each case, the group that changed most in the direction of better mental health was the Completers. On all five scales, these changes were significantly greater than those of the est-Control group (see Figures 2 and 3). However, it should be pointed out again that these analyses are not independent of individual post-post and pre-pre MMPI comparisons presented above.

Table 6 provides the mean pre-post score differences by group for each of the MMPI scales.

Summary of MMPI Results

No pretraining differences among the three treatment groups (est-treatment, est-Controls, and Controls) were obtained for the frequency of deviant scale scores and only one significant difference was found in the scale-by-scale comparisons. Thus, it can be concluded that there were no differences among these groups prior to beginning the est training.

No posttraining differences among the three treatment groups were obtained for the frequency of deviant scale scores. In contrast, differences were found within normal limits on a scale-by-scale comparison. In 12 of the 17 significant Fs, the Duncan's posttest revealed that it was the Dropouts who differed from the Completers or the est-Controls. In the remaining five analyses, the Completers differed from both the Dropouts and the est-Controls and it is these differences that most clearly reflect the impact of the est training. The five scales involved are PT (Psychasthenia), A (Anxiety), ES (Ego Strength), CA (Caudality), and DY (Dependency).

Semantic Differential

The second instrument used to measure psychological outcomes occurring as a result of completing est training was the Semantic Differential.

TABLE 6

PRE-POST MMPI MEAN DIFFERENCES

| SCALE | COMPLETERS (n = 18) | DROPOUTS (n = 17) | est-CONTROLS (n = 25) |
|---|---|---|---|
| L | 2.56 | 0.00 | 2.04 |
| F | -9.22 | -.11 | -2.08 |
| K | 4.22 | .35 | 2.28 |
| HS | -4.88 | 2.41 | .44 |
| D | -7.17 | .71 | .96 |
| HY | -5.39 | 1.94 | 1.36 |
| PD | -5.33 | -4.41 | -.60 |
| MF | 0.56 | -1.29 | 1.88 |
| PA | -4.28 | 1.88 | -.56 |
| PT | -5.72 | -4.35 | 2.08 |
| SC | -10.39 | -2.12 | .76 |
| MA | 0.39 | -3.47 | .96 |
| SI | -3.28 | -.71 | .16 |
| A | -7.67 | -3.18 | -2.36 |
| R | 3.39 | 3.82 | 3.64 |
| ES | 8.72 | 4.18 | 1.56 |
| LB | 3.44 | 3.41 | .12 |
| CA | -7.06 | -1.78 | -2.00 |
| DY | -4.61 | -3.33 | -1.12 |
| DO | 3.67 | 1.44 | 1.48 |
| RE | .11 | 4.61 | -.92 |
| PR | -3.67 | -5.83 | -1.88 |
| ST | 5.39 | -1.78 | 2.20 |
| CN | .17 | -2.61 | -.04 |
| WB | -2.11 | -3.00 | -.91 |

Twelve concepts were selected for evaluation on the usual seven-point bi-polar semantic scales. They were:

1. MYSELF AS I AM NOW
2. MY LIFE BEFORE PRISON
3. MY PHYSICAL HEALTH
4. MY CORRECTIONAL OFFICER ON THE UNIT
5. MYSELF AS I WANT TO BE
6. MY LIFE DURING PRISON
7. MY RESPONSIBILITY FOR MY LIFE
8. MY WORK SUPERVISOR
9. EST
10. MY LIFE AFTER PRISON
11. MY PSYCHOLOGICAL WELL-BEING
12. MY ABILITY TO BE BIGGER THAN MY PROBLEMS

Pretest. Analyses of variance computed on the sum of the evaluative, activity, and potency factors of responses to the 12 concepts tested prior to training resulted in only one significant difference among the four groups (Completers, Dropouts, est-Controls, and Controls).* For the concept EST, the Completers and Dropouts differed significantly from the Non-volunteer Controls, $F(3,137) = 2.78$, $p < .04$, i.e., those who volunteered to participate in the training rated EST more highly than did those who did not volunteer. Inspection of the component factors (Evaluation, Activity, and Potency) revealed significant differences on four Potency and one Activity factors. No differences among the groups on the Evaluative

*Subject scores were not analyzed using the distance formula advocated by Osgood, Tannenbaum, and Suci (1975). Rather, scores were determined numerically using seven as the highest rating and one as the lowest regardless of concept. Traditional parametric statistics were employed in the usual manner.

dimension were found. Table 7 provides the statistical results for these analyses.

TABLE 7

STATISTICALLY SIGNIFICANT SEMANTIC DIFFERENTIAL FACTORS: PRETEST

| CONCEPTS | FACTORS | F RATIOS | DUNCAN'S* |
|---|---|---|---|
| MYSELF AS I AM NOW | Potency | $F(3,137) = 2.87$, $p < .03$ | 1 > 2, 3, 4 |
| EST | Potency | $F(3,137) = 4.75$, $p < .003$ | 1, 2, 3 > 4 |
| MY PSYCHOLOGICAL WELL-BEING | Potency | $F(3,136) = 2.65$, $p < .05$ | 1 > 4 |
| MY ABILITY TO BE BIGGER THAN MY PROBLEMS | Potency | $F(3,134) = 3.20$, $p < .02$ | 1 > 3, 4 |
| MYSELF AS I WANT TO BE | Activity | $F(3,137) = 2.71$, $p < .04$ | 1 > 3 |

*$p < .05$ for Duncan's New Multiple Range Test
1 = Completers, 2 = Dropouts, 3 = est-Controls, 4 = Non-volunteer Controls

The pretest means of all four groups broken down into the three dimensions are presented in Table 8.

Posttest. Analyses of variance revealed that the three treatment groups differed significantly on five of the twelve concepts overall. These concepts were:

| | | |
|---|---|---|
| MYSELF AS I AM NOW | $F(2,144) = 4.21$, $p < .01$ | 1 > 3* |
| MY PHYSICAL HEALTH | $F(2,116) = 412$, $p < .01$ | 1 > 3 |
| MY LIFE DURING PRISON | $F(2,114) = 3.17$, $p < .04$ | 1 > 3, 2 |
| EST | $F(2,116) = 17.15$, $p < .0001$ | 1 > 3, 2 |
| MY ABILITY TO BE BIGGER THAN MY PROBLEMS | $F(2,116) = 6.10$, $p < .003$ | 1 > 3, 2 |

*1 = Completers, 2 = Dropouts, 3 = est-Controls

TABLE 8

SEMANTIC DIFFERENTIAL FACTOR MEANS: PRETEST

| CONCEPTS | COMPLETERS | | | DROPOUTS | | | est-CONTROLS | | | NON-VOLUNTEERS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | A | P | E | A | P | E | A | P | E | A | P* |
| 1. Myself now | 6.4 | 5.5 | 6.0 | 6.0 | 5.5 | 5.6 | 5.9 | 4.9 | 5.3 | 5.9 | 5.0 | 5.5 |
| 2. My life before prison | 5.3 | 5.4 | 5.4 | 5.2 | 5.2 | 5.3 | 5.7 | 5.5 | 5.3 | 5.3 | 5.7 | 5.4 |
| 3. My physical health | 6.3 | 5.4 | 5.9 | 6.2 | 5.8 | 6.1 | 5.9 | 5.4 | 6.0 | 5.7 | 5.3 | 5.7 |
| 4. My correctional counselor | 4.6 | 3.7 | 4.1 | 4.3 | 3.6 | 3.9 | 5.2 | 4.6 | 4.6 | 5.0 | 4.6 | 6.4 |
| 5. Myself as I want to be | 6.9 | 6.1 | 6.4 | 6.6 | 6.0 | 6.1 | 6.4 | 5.4 | 5.9 | 6.6 | 5.9 | 6.0 |
| 6. My life during prison | 4.7 | 4.4 | 5.1 | 4.4 | 4.0 | 4.7 | 5.5 | 4.7 | 5.2 | 5.0 | 4.5 | 4.4 |
| 7. My responsibility for my life | 6.4 | 5.8 | 6.4 | 5.9 | 5.4 | 5.8 | 5.9 | 5.4 | 5.9 | 5.7 | 5.2 | 5.7 |
| 8. My work supervisor | 5.2 | 4.5 | 4.5 | 5.3 | 4.5 | 4.6 | 5.9 | 5.3 | 5.6 | 5.8 | 5.5 | 5.4 |
| 9. est | 5.6 | 5.1 | 5.5 | 5.7 | 5.2 | 5.5 | 6.4 | 5.5 | 6.0 | 6.6 | 5.9 | 6.0 |
| 10. My life after prison | 6.6 | 5.5 | 6.1 | 6.4 | 6.0 | 6.1 | 5.7 | 5.1 | 5.5 | 5.4 | 5.1 | 5.2 |
| 11. My psychological health | 6.1 | 5.5 | 6.1 | 6.0 | 5.6 | 5.8 | 6.4 | 5.5 | 6.1 | 6.3 | 5.4 | 6 |
| 12. My ability to be bigger | 6.1 | 5.5 | 6.2 | 5.8 | 5.6 | 5.7 | 5.7 | 5.1 | 5.5 | 5.4 | 5.1 | 5.3 |

*E = evaluation, A = activity, P = potency

Duncan's post hoc analyses showed that the Completers' responses were significantly higher than were those of the est-Controls on these five concepts and higher than the Dropouts on MY LIFE DURING PRISON, EST, and MY ABILITY TO BE BIGGER THAN MY PROBLEMS.

Table 9 provides the data for the significant component factor analyses. As indicated in Table 9, nine factors within these five concepts reached statistical significance. In every instance, the Completers have the highest factor score: higher than the est-Controls on 7 factors and higher than the Dropouts on 8 factors. Table 10 provides the mean posttest scores for each group for all 12 concepts.

Self-concept. To determine whether the self-perceptions of those who completed est differed after training from those in the other groups, the distance between the concepts MYSELF AS I WANT TO BE and MYSELF AS I AM NOW was summated, i.e., the greater the distance between these two aspects of self, the less congruence between the ideal self and perceived self, and the greater potential for inner conflict. The mean differences for the three groups were:

| Group | Ideal vs. Actual Self |
|---|---|
| Completers | 2.00 |
| Dropouts | 5.48 |
| est-Controls | 5.09 |

A one-way analysis of variance computed on these data did not reach the .05 level, $F(2,113) = 2.39$, $p < .09$, although the trend in the data was in favor of the Completers having a smaller difference between these two aspects of self.

Pre-post analysis. Analyses of variance on each group's change scores from pre- to posttesting resulted in a significant difference among the groups only for the overall factor of EST, $F(2,53) = 4.34$, $p < .01$. The

TABLE 9

STATISTICALLY SIGNIFICANT SEMANTIC DIFFERENTIAL FACTORS: POSTTEST

| CONCEPTS | FACTORS | FACTORS | DUNCAN'S* |
|---|---|---|---|
| Myself as I am now | -- | $F(2,114) = 4.21$, $p < .01$ | 1 > 3 |
| | Activity | $F(2,114) = 3.60$, $p < .03$ | 1 > 2 |
| My physical health | -- | $F(2,116) = 4.12$, $p < .01$ | 1 > 3 |
| | Evaluation | $F(2,116) = 3.56$, $p < .03$ | 1 > 3 |
| My life during prison | -- | $F(2,114) = 3.17$, $p < .04$ | 1 > 2, 3 |
| | Evaluation | $F(2,114) = 3.17$, $p < .04$ | 1 > 2, 3 |
| | Activity | $F(2,114) = 4.28$, $p < .01$ | 1 > 2, 3 |
| est | -- | $F(2,116) = 17.15$, $p < .0001$ | 1 > 2, 3 |
| | Evaluation | $F(2,116) = 12.12$, $p < .0001$ | 1 > 2, 3 |
| | Activity | $F(2,116) = 20.61$, $p < .0001$ | 1 > 2, 3 |
| | Potency | $F(1,116) = 18.42$, $p < .0001$ | 1 > 2 > 3 |
| My ability to be bigger than my problems | -- | $F(2,116) = 6.10$, $p < .003$ | 1 > 2, 3 |
| | Activity | $F(2,116) = 5.74$, $p < .004$ | 1 > 2, 3 |
| | Potency | $F(2,116) = 4.57$, $p < .01$ | 1 > 2 |

*$p < .05$ for Duncan's New Multiple Range Test
1 = Completers, 2 = Dropouts, 3 = est-Controls

Completers' rating of EST was significantly more positive than the other two groups which did not differ from each other.

Summary of Semantic Differential Results

Analyses of the overall factors (summated across the Activity, Potency, and Evaluation component factors) yielded no differences on

TABLE 10

SEMANTIC DIFFERENTIAL FACTOR MEANS: POSTTEST

| CONCEPT | COMPLETERS | | | DROPOUTS | | | est-CONTROLS | | |
|---|---|---|---|---|---|---|---|---|---|
| | E | A | P | E | A | P | E | A | P* |
| 1. Myself now | 6.4 | 5.7 | 5.9 | 6.7 | 5.1 | 5.5 | 5.9 | 5.0 | 5.3 |
| 2. My life before prison | 5.0 | 5.2 | 4.9 | 5.3 | 5.3 | 5.1 | 5.0 | 4.9 | 5.1 |
| 3. My physical health | 6.6 | 5.9 | 6.1 | 6.4 | 6.3 | 6.0 | 6.1 | 5.2 | 5.7 |
| 4. My correctional counselor | 4.8 | 4.2 | 4.5 | 5.1 | 4.3 | 4.6 | 4.8 | 3.7 | 4.3 |
| 5. Myself as I want to be | 6.4 | 5.9 | 6.3 | 6.6 | 5.8 | 6.1 | 6.5 | 5.6 | 6.0 |
| 6. My life during prison | 5.6 | 5.3 | 5.5 | 4.8 | 4.4 | 4.9 | 4.9 | 4.4 | 5.0 |
| 7. My responsibility for my life | 6.4 | 5.9 | 6.4 | 6.1 | 5.4 | 4.7 | 5.8 | 5.2 | 5.8 |
| 8. My work supervisor | 5.2 | 4.8 | 4.8 | 5.6 | 5.1 | 5.1 | 5.1 | 4.7 | 4.8 |
| 9. est | 6.3 | 6.2 | 6.5 | 5.3 | 4.9 | 5.3 | 4.8 | 4.4 | 4.7 |
| 10. My life after prison | 6.2 | 5.6 | 6.0 | 6.3 | 5.7 | 6.1 | 6.4 | 5.5 | 6.1 |
| 11. My psychological health | 6.1 | 5.8 | 6.1 | 5.9 | 5.1 | 5.5 | 5.9 | 5.2 | 5.7 |
| 12. My ability to be bigger | 6.4 | 5.9 | 6.3 | 5.7 | 4.9 | 5.5 | 5.8 | 5.2 | 5.8 |

*E = evaluative, A = activity, P = potency

pretest among the three groups of est volunteers. Understandably, the est-volunteers rated est significantly higher than the Non-volunteer Controls. On posttest, in contrast, differences between Completers and est-Controls were obtained on five factors with three of the factors also differentiating between Completers and Dropouts.

Analyses of the component factors yielded similar results. On pretest, differences were found on 5 out of 36 component factors while on

posttest, differences were found on 9 of the 36 component factors. In every instance except one (est-Potency), the differences observed on pretest were not obtained on posttest. The posttest differences discriminated between the Completers and est-Controls in six cases and on five of these, the Completers also differed from the Dropouts, thus suggesting an impact resulting from the est training. A conservative approach should be taken in interpreting the results on the component factors due to the large number of analyses made.

State-Trait Anxiety

The State-Trait Anxiety Inventory (STAI) is comprised of separate self-report scales for measuring two reputedly distinct anxiety concepts: trait anxiety (A-Trait) which measure how tense people generally feel and state anxiety (A-State) which measures the intensity induced by stressful procedures. The A-Trait refers to relatively stable individual differences in anxiety proneness while A-State measures intensity and fluctuates over time. In general, the two tend to fluctuate rather closely together in these data.

Pretest comparisons. Analyses of variance computed on four sets of pretest scores revealed a significant difference in self-reported trait anxiety among the groups that were pretested, $F(3,136) = 3.95$, $p < .009$. The Duncan's New Multiple Range Test showed that only the Non-volunteer Controls reported significantly more anxiety than did those who completed the training and those in the est-Control group. The Dropouts did not differ significantly from those in the other three groups. The mean and N for each group are shown in Table 11.

An analysis of variance computed on the pretest state anxiety scores for the same four groups also resulted in significance, $F(3,136) = 2.89$, $p < .04$, with the post hoc analysis showing greater anxiety on this

TABLE 11

AVERAGE STATE AND TRAIT ANXIETY SCORES: PRETEST

| GROUP | N | STATE ANXIETY | | TRAIT ANXIETY | |
|---|---|---|---|---|---|
| | | MEAN | DUNCAN'S | MEAN | DUNCAN'S* |
| 1. COMPLETERS | 25 | 34.48 | < 4 | 33.84 | < 1 |
| 2. DROPOUTS | 34 | 39.21 | | 39.00 | |
| 3. est-CONTROLS | 46 | 38.98 | | 37.28 | < 1 |
| 4. NON-VOLUNTEERS | 35 | 43.00 | > 4 | 42.09 | > 3, 4 |

*$p < .05$

dimension among the Non-volunteer Controls than the Completers. The Dropouts and the est-Controls did not differ significantly from each other nor from either of the other two groups. Table 11 also provides the data for the state anxiety analysis.

Thus, it can be concluded that prior to the training, those who volunteered for and later completed est, on the average, reported significantly less state and less trait anxiety than did inmates who specifically indicated that they did not wish to participate in the training.

Posttest comparison. An analysis of variance on trait anxiety revealed a significant difference among the three treatment groups after the training was completed, $F(2,118) = 4.95$, $p < .008$. The post hoc analysis (see Table 12) showed that those who completed est, on the average, reported significantly less anxiety than did those in the est-Control or Dropout groups ($p < .05$). Similarly for state anxiety, those completing est reported significantly less anxiety than did those who dropped out or did not receive training, $F(2,118) = 4.81$, $p < .009$. Table 12 also provides the data for the post hoc state anxiety analysis.

TABLE 12

AVERAGE STATE AND TRAIT ANXIETY SCORES: POSTTEST

| GROUP | N | STATE ANXIETY | | TRAIT ANXIETY | |
|---|---|---|---|---|---|
| | | MEAN | DUNCAN'S | MEAN | DUNCAN'S* |
| 1. COMPLETERS | 33 | 31.67 | < 2, 3 | 30.12 | < 2, 3 |
| 2. DROPOUTS | 30 | 37.57 | > 1 | 35.87 | > 1 |
| 3. est-CONTROLS | 58 | 37.28 | > 1 | 36.01 | > 1 |

*$p < .05$

Pre-post analysis. Pre-post analyses of change scores resulted in no significant differences for any of the three groups for state or trait anxiety measures.

Summary of State-Trait Anxiety Results

Those completing est training did not differ significantly from those in the Dropout or est-Control groups prior to training on either state or trait anxiety; however, after training, the est Completers reported significantly less of both state and trait anxieties than did the other two groups. Pre-post analyses showed that change scores in both state and trait anxiety among the three groups did not differ significantly one from the other.

Overall Summary of Psychological Test Results

No pretraining differences were found among the treatment groups, which suggests that the randomization procedures employed did indeed create equal comparison groups prior to beginning the training.

The posttests did result in some significant differences among the groups. These differences were almost exclusively between the Completers

and the Dropouts or in a few instances between them and those serving as est-Controls. These differences, in some cases, could be interpreted as due to the impact from est training. However, because of the large number of analyses made and because psychological tests are a form of self-report, they must be treated with caution. In addition, in several instances in which the Dropouts differed significantly from the Completers on a dimension, the Completers and/or Dropouts did not differ from the est-Controls which did not experience any of the training. Thus, such differences would have to be attributed to differences due to subject characteristics rather than any active treatment encountered.

# Chapter V

## Physiological Outcomes

Four biofeedback measurements were employed in the study: hand temperature, galvanic skin resistance (GSR), basal skin resistance, and respirations per minute. These measurements were used to gain an objective account of the subjects' physiological functioning and specifically their ability to control reactions to stress. Previous research has found that: (a) overactivation of the sympathetic branch of the autonomic nervous system has been found to vary with a person's self-image and emotional outlook on life (cf. Keefe & Gardner, 1979; Lawrence, 1972; Lietz, 1977); and (b) blood flow in the peripheral parts of the body is controlled specifically by the sympathetic section. Consequently, hand temperature measurements were employed to determine whether est training results in such sympathetic deactivation. The clinical importance of such a finding is readily apparent considering evidence that increasing hand temperature has been shown to reduce migraine headaches (cf. Budzynski, 1973; Keefe & Gardner, 1979; Green & Walters, 1973; Wickramasekera, 1974), as well as other similar stress reactions (cf. Orlando, 1975; Lietz, 1977).

Basal Skin Resistance (BSR), on the other hand, is a direct measure of the skin's resistance as an electrical conductor, i.e., a measure of the electrolyte concentration in the tissue (Allen, 1979). Although BSR is not a direct measure of the activity level of the autonomic nervous system, it is correlated highly enough to be accepted as an equivalent measure (Allen, 1979).

Galvanic Skin Resistance (GSR) measures the same physical phenomenon as does BSR; however, the GSR is an index of the rate of change in basal skin resistance and is sometimes described as a measure of "lability" or changeableness of the autonomic nervous system (ANS). As with BSR, the GSR

is not a direct measure of ANS activity, but one which appears to be highly correlated with changes in this system.

Respiration Rate (RR) was used as a measure of physiological arousal due to its long history of use as a measure of changes in emotional stability--most of which predates biofeedback popularity.

Pretest. Prior to beginning the est training, three groups were pretested on each of the four biofeedback measures. As noted in Chapter II, each inmate was exposed to a standard stimulus situation. He was asked to sit down in a large, highly padded recliner chair and to place the chair in its full reclining position. The chair was situated facing a wall which had a 2½' x 2½' abstract painting mounted directly in eye view of the subject reclining in the chair. After the person was fully reclined, a tape recording began which said the following:

> Welcome! We genuinely appreciate your cooperation in helping us to evaluate the effects of the Erhard Seminar Training at F.C.I. Today we are interested in acquiring some physiological measures of how you respond to a brief period of non-activity. The equipment we are using will allow us to monitor your rate of breathing, hand temperature and skin resistance. The instruments will not be doing anything to you, they simply detect, amplify and record the activity level of your nervous system while you are at rest. The attendant will now attach the physiological sensors to you. Once the sensors have been adjusted, please recline in your chair and sit quietly during the measurements. The entire process will take about 10 minutes.
>
> - - - 10 minutes - - -
>
> The measurements are now completed. Please return your chair to an upright position. The attendant will remove the sensors from your hand and chest. Thank you for your cooperation. Please leave quietly and without comment.

While all four physiological responses were continually monitored on a polygraph tape, hand temperature and basal skin resistance measures were recorded every 2 minutes over the 10-minute period for analysis. Respiration rates and GSR measures were taken at 4, 6, 8, and 10-minute intervals. The mean responses of the pretests are graphed in Tables 13 through 16.

TABLE 13

HAND TEMPERATURE: PRETEST

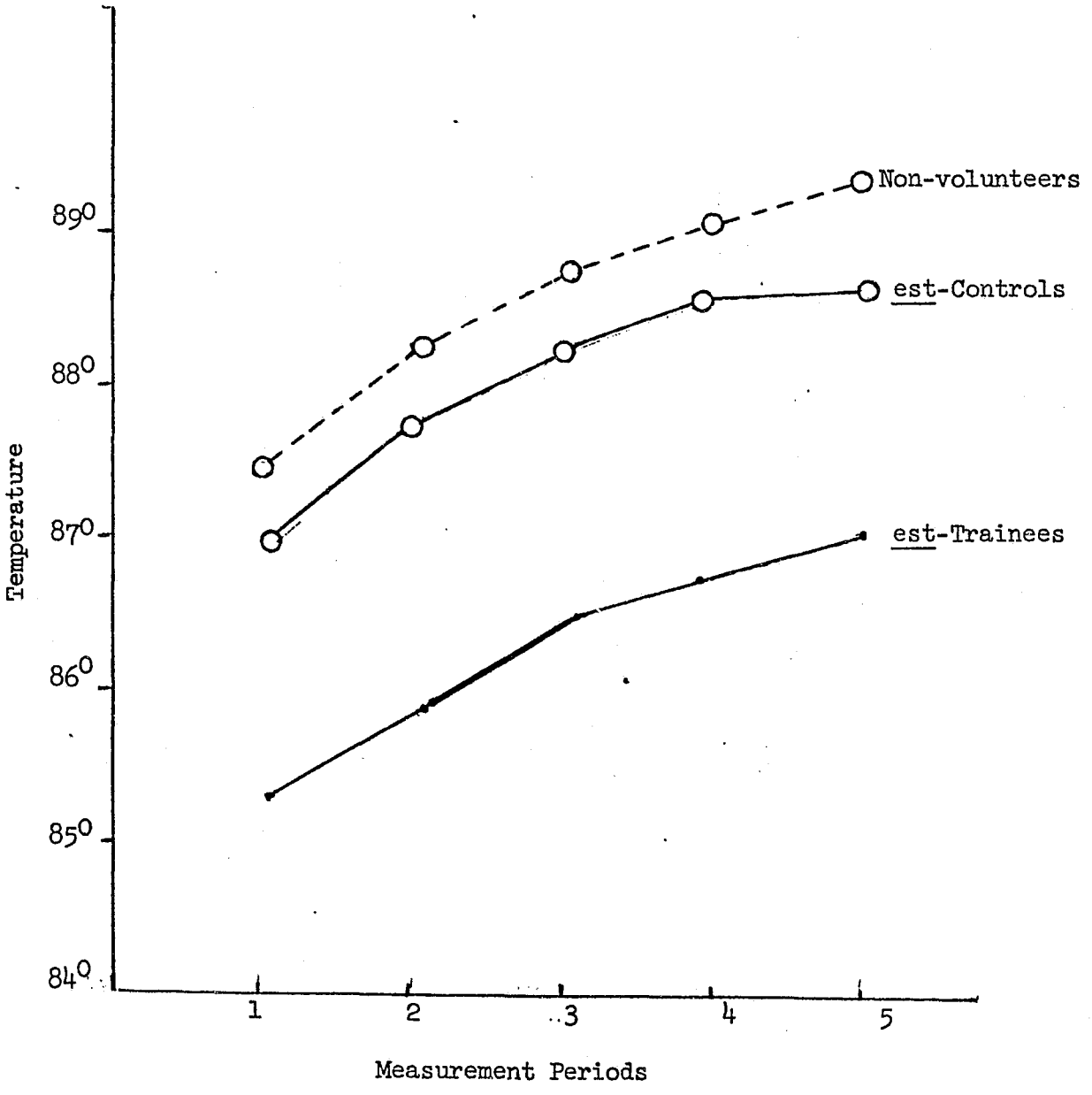


TABLE 14

BASAL SKIN RESISTANCE: PRETEST

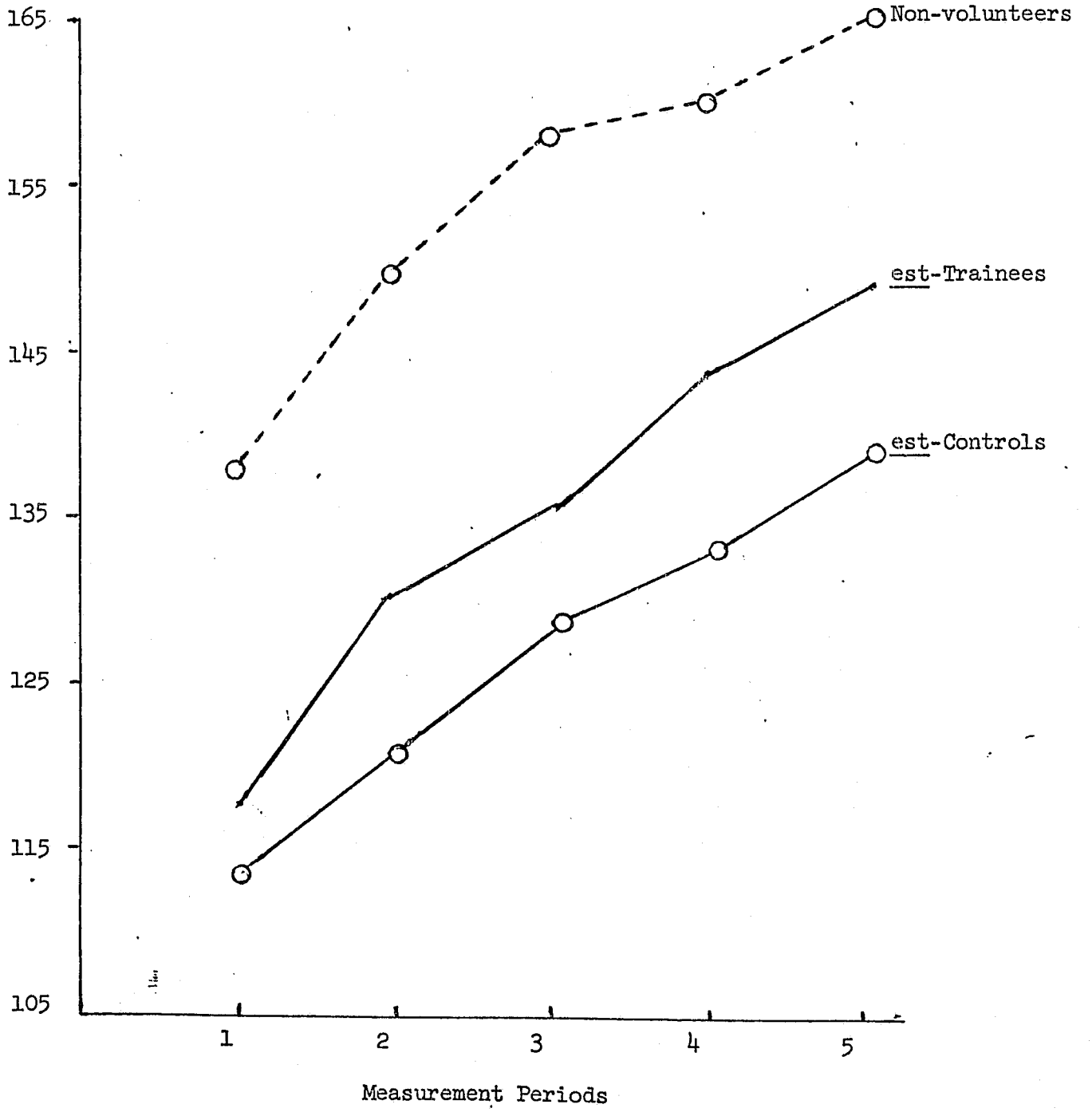


TABLE 15

GALVANIC SKIN RESPONSE: PRETEST

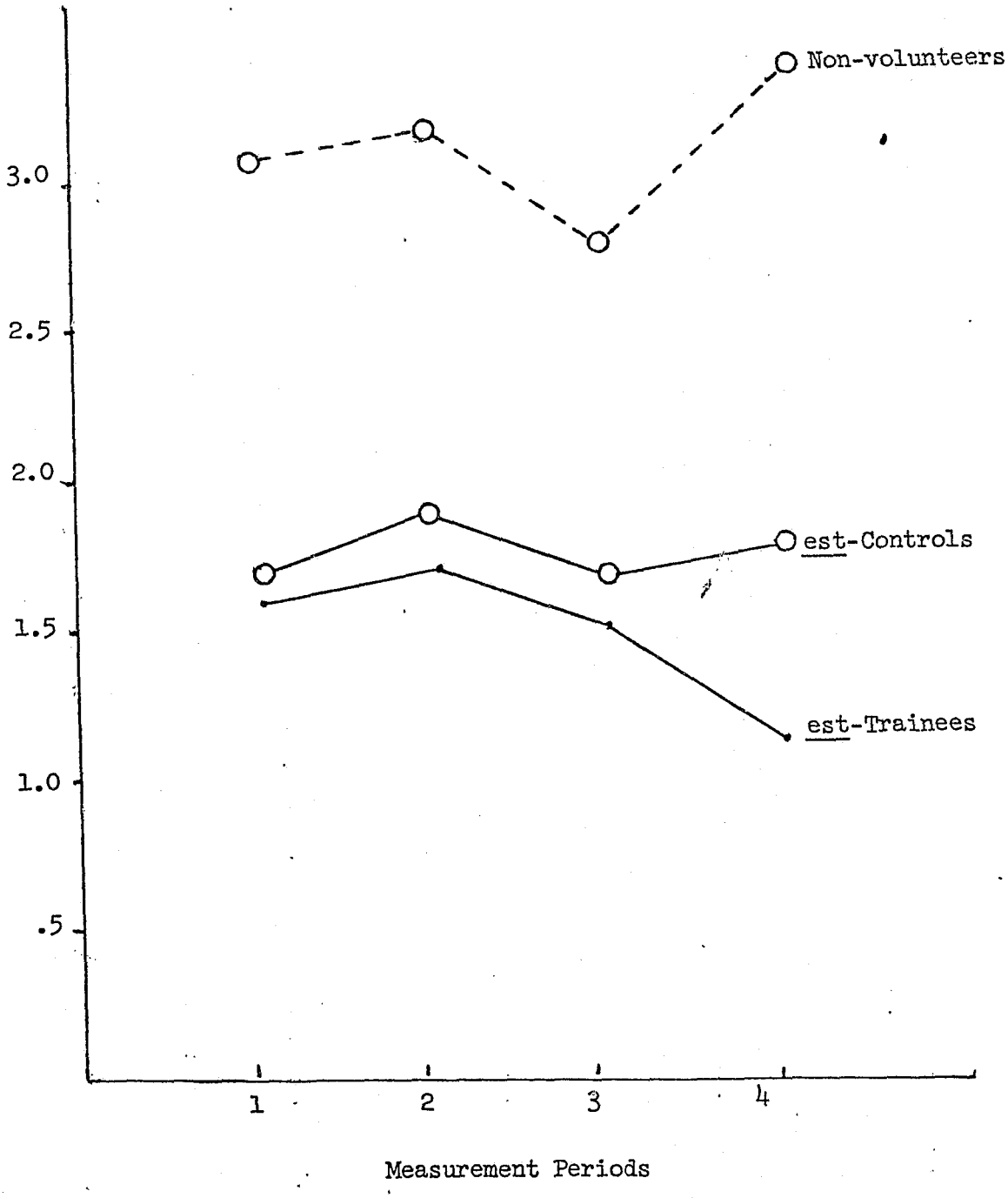
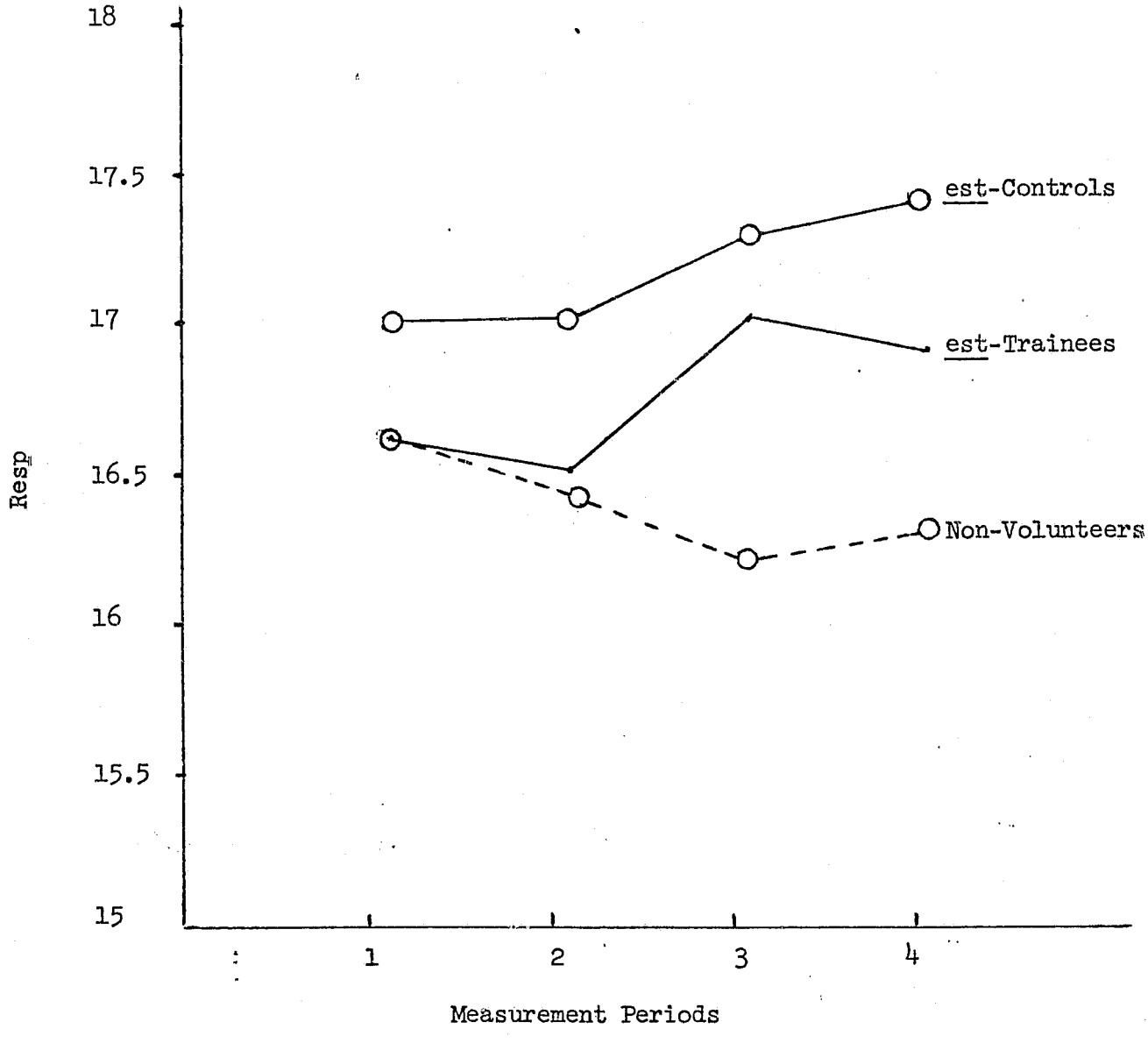


TABLE 16

RESPIRATIONS PER MINUTE: PRETEST



Hand temperature. Prior to the est training, each group registered a steady but increasing hand temperature over the five periods of measurement, i.e., at 2, 4, 6, 8, and 10 minutes. The Non-volunteer Controls recorded significantly higher hand temperatures for each of the five recording periods than did those selected to receive training. On two periods (two and three), the est-Controls' mean temperature was also significantly higher than those designated to take est. These data are presented in Table 17. To determine whether the groups differed prior to treatment in their ability to relax in a structured stimulus setting in which cognitive activity was nonstructured, hand temperature responses for the first two periods of measurement were summed and then subtracted from the summation of periods four and five (est-treatment = 2.73 degrees; est-Controls = 2.49 degrees; and, Non-volunteer Controls = 2.83 degrees). The result of the analysis of variance was not significant, $F(2,139) = .27$, $p < .76$. Thus, it may be concluded that prior to training, the experimental and control groups did not differ on this dimension.

TABLE 17

HAND TEMPERATURE MEASUREMENTS: PRETEST

| MEASUREMENT PERIOD | F RATIOS | DUNCAN'S* |
|---|---|---|
| 1 | $F(2,139) = 3.38$, $p < .03$ | 1 < 3 . |
| 2 | $F(2,139) = 4.06$, $p < .01$ | 1 < 3, 1 < 2 |
| 3 | $F(2,139) = 3.61$, $p < .02$ | 1 < 3, 1 < 2 |
| 4 | $F(2,139) = 3.66$, $p < .02$ | 1 < 3 |
| 5 | $F(2,139) = 3.51$, $p < .03$ | 1 < 3 |

*$p < .05$
1 = est-Treatment (Completers and Dropouts), 2 = est-Controls,
3 = Non-volunteers

In addition to hand temperature per se, the hour of day, room temperature, and room humidity were monitored. Although the inmates were randomly assigned to testing and therefore differences on these criteria could be assumed to be equally distributed across groups, some significant correlations were obtained between increases in hand temperature and scores on these varibles; the coefficients are shown in Table 18. Although the hand temperature scores of the group selected to receive est training correlated significantly with all three--hour, temperature, and humidity--, the means of this group on these dimensions (hour, room temperature, and humidity) did not vary significantly from those of the other two groups.

TABLE 18

CORRELATION OF HAND TEMPERATURE WITH HOUR OF DAY, ROOM TEMPERATURE, AND ROOM HUMIDITY: PRETEST

| VARIABLE | est-TREATMENT (n = 60) | est-CONTROLS (n = 46) | NON-VOLUNTEERS (n = 36) |
|---|---|---|---|
| Hour of Day | .33, $p < .01$ | .24 | .36, $p < .05$ |
| Room Temperature | .35, $p < .01$ | .22 | .23 |
| Room Humidity | -.24, $p < .05$ | -.35, $p < .01$ | -.29 |

Basal skin resistance. As noted earlier, basal skin resistance measures the skin's resistance as an electrical conductor. Fluctuations in this conductance (usually measured by GSR) are customarily associated with increasing states of anxiety (cf. Lader, 1967; Lader & Wing, 1966). As shown in Table 14, all three groups prior to the est training demonstrated consistent increases in basal skin resistance (BSR) readings over the five observation periods. Although none of the F ratios reached statistical

significance for any of the five time periods, the Non-volunteer Controls, as was found for hand temperature, scored consistently higher in each case than did the other two groups.

Galvanic skin resistance. Galvanic skin resistance (GSR) ratings were recorded on four time periods during the 10-minute pretest period (see Table 15). Significant F ratios were found among the three groups for the first, second, and fourth periods. The Fs for these periods were $F(2,139) = 3.35$, $p < .03$; $F(2,139) = 3.99$, $p < .02$; and $F(2,139) = 6.27$, $p < .002$, respectively. The Duncan post hoc analysis revealed that the Non-volunteer Controls demonstrated significantly higher GSR scores than did the est-Treatment or est-Control for periods one and two. For period four, the Non-volunteer scores were significantly higher than the est-Trainees but not the est-Controls. The Trainees and the est-Controls did not differ significantly on any of the five time periods measured.

Respiration rate. Normally it is expected that as hand temperature rises, respiration rates go down. This relationship was shown by the Non-volunteer Controls but not by the est-Treatment or est-Control groups (see Tables 13 and 16). This differential finding is a result of differences among the groups on hand temperature since analyses of variance computed on the respiration data revealed no significant differences among the three groups on any of the four observation pretest periods. Thus, it can be concluded that the groups demonstrated similar rates of respiration when confronted with a standard stimulus condition prior to the beginning of the est training.

Posttest

Posttest comparisons were made among Completers, Dropouts, and est-Controls. The Non-volunteers were not posttested because it was impossible to gain their cooperation to go through the testing. The mean responses by

measurement periods for each of these three groups for each of the four physiological variables are graphed in Tables 19 through 22.

Hand temperature. As can be seen in Table 19, hand temperature of the Completers and est-Controls increased steadily after baseline (measure #1). The Dropouts, however, demonstrated one reversal which occurred during observation period two. Analyses of variance among the groups failed to reach traditional levels of significance on any of the four periods of observation. Thus, it can be concluded that the Completers did not differ significantly from the est-Controls or the Dropouts on measures of hand temperature when confronted with an innocuous stimulus situation which asked them only to recline in their chairs and sit quietly for 10 minutes.

BSR, GSR, and respiration rates. Although the Completers demonstrated a rather large and consistent increase in basal skin resistance, analyses of variance failed to result in a significant F ratio for any of the five observation periods. Similarly, no differences among the groups were found for galvanic skin response and respirations per minute measured over the four observation periods.

Summary

The results of the physiological analyses of the study indicate that inmates who volunteer for est training do not differ significantly from non-volunteers relative to measurements of galvanic skin resistance, basal skin resistance, and respirations per minute. However, measures of hand temperature were significantly higher for the Non-volunteers for three of the five recorded periods. Given findings of previous research (e.g., Budzynski, 1973; Green & Walters, 1973; Keefe & Gardner, 1979; Lietz, 1977; Orlando, 1975; Wickramasekera, 1974) which have shown that changes in hand temperature relate significantly with changes in stress, results of this study would support the hypothesis that those who volunteer for self-help

TABLE 19

HAND TEMPERATURE: POSTTEST

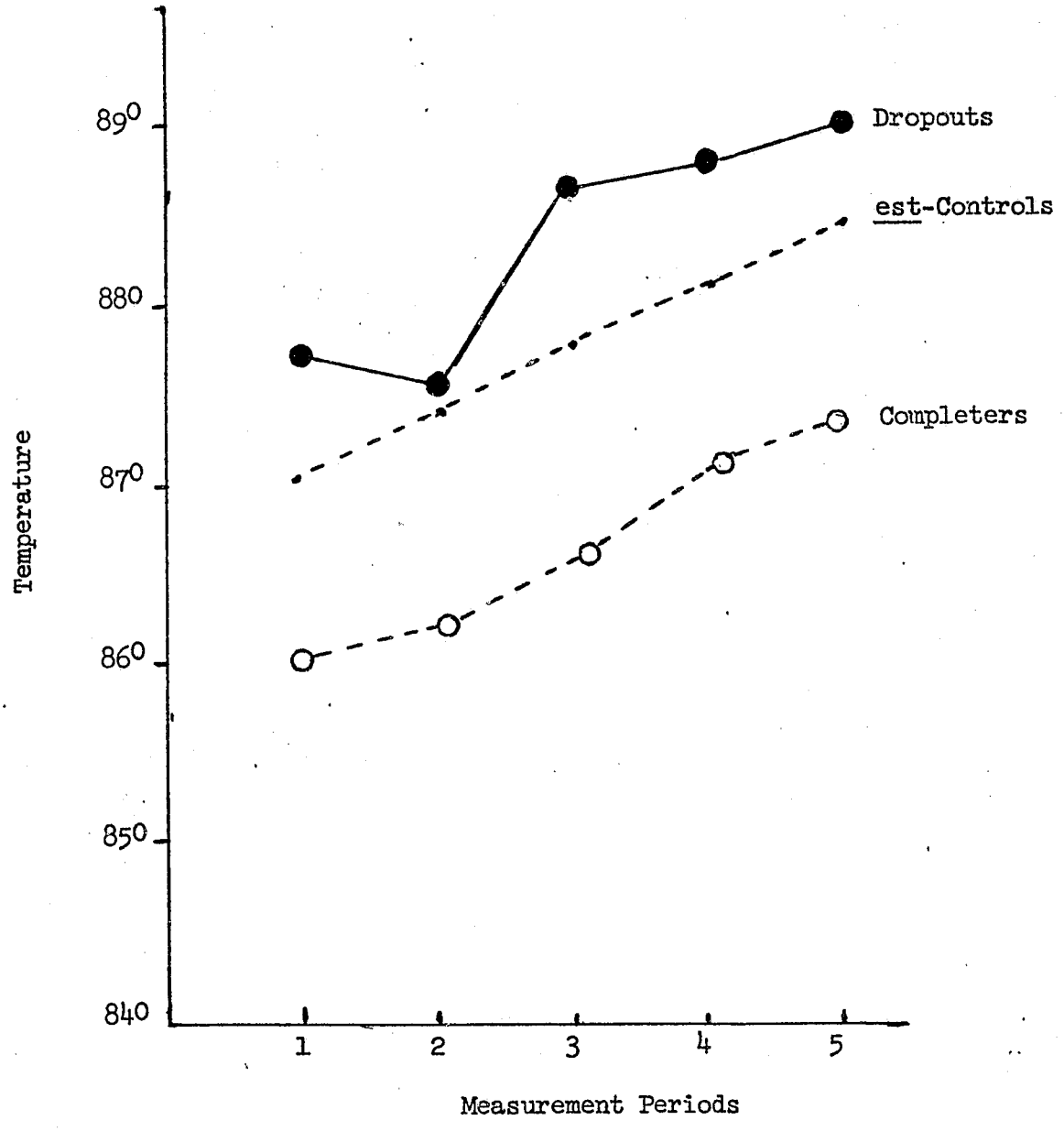


TABLE 20

BASAL SKIN RESISTANCE: POSTTEST

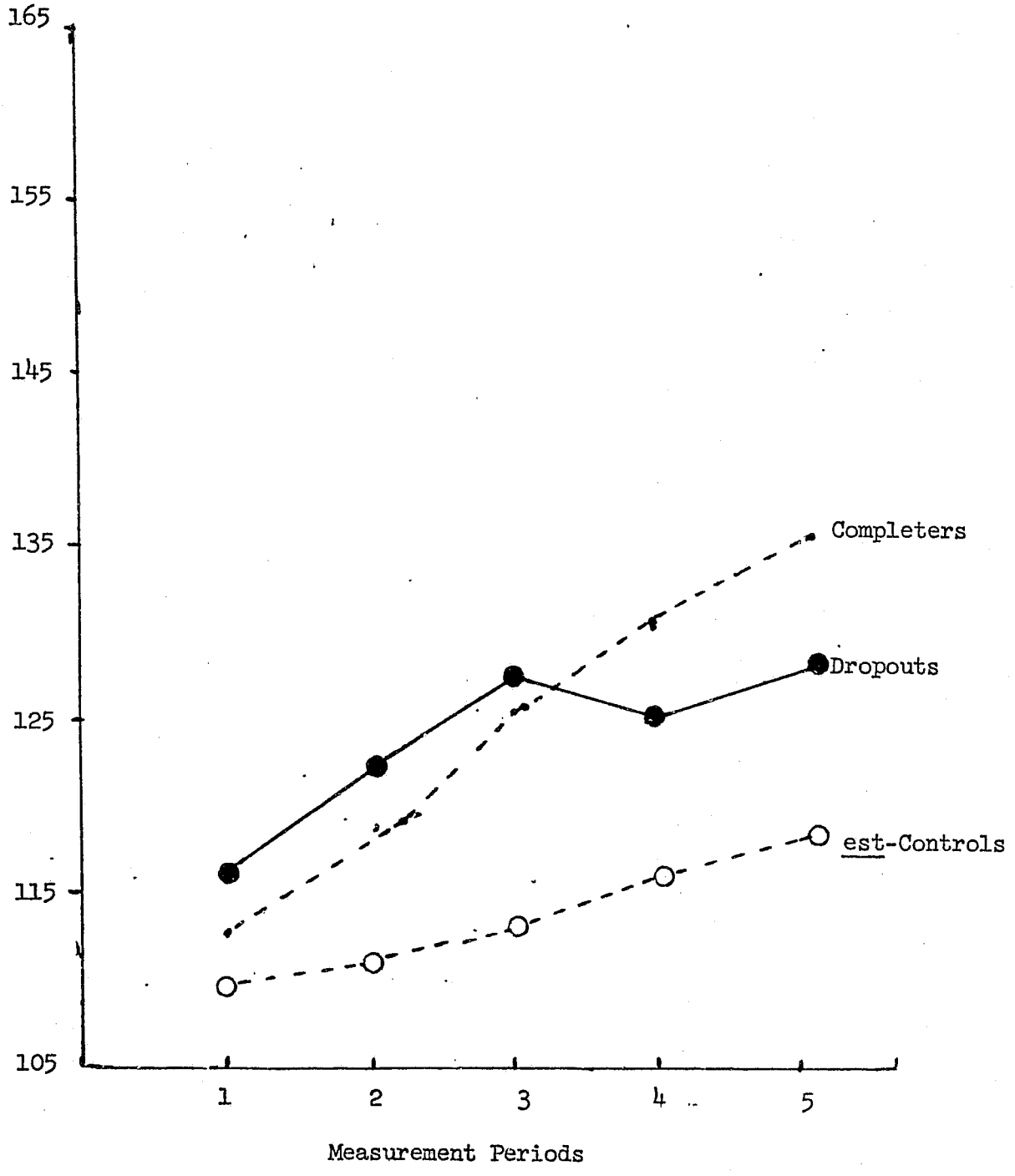


TABLE 21

GALVANIC SKIN RESPONSE: POSTTEST

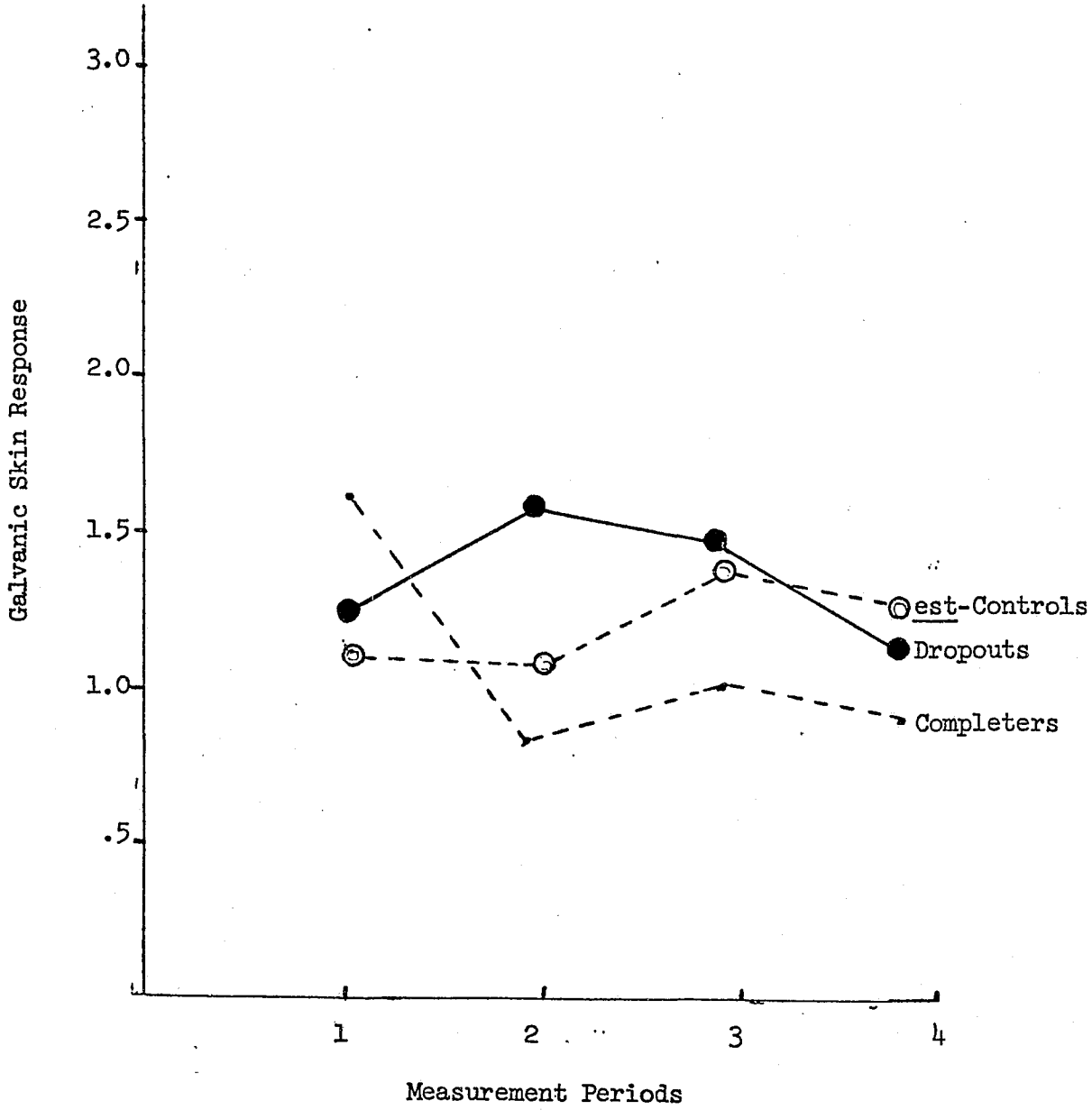
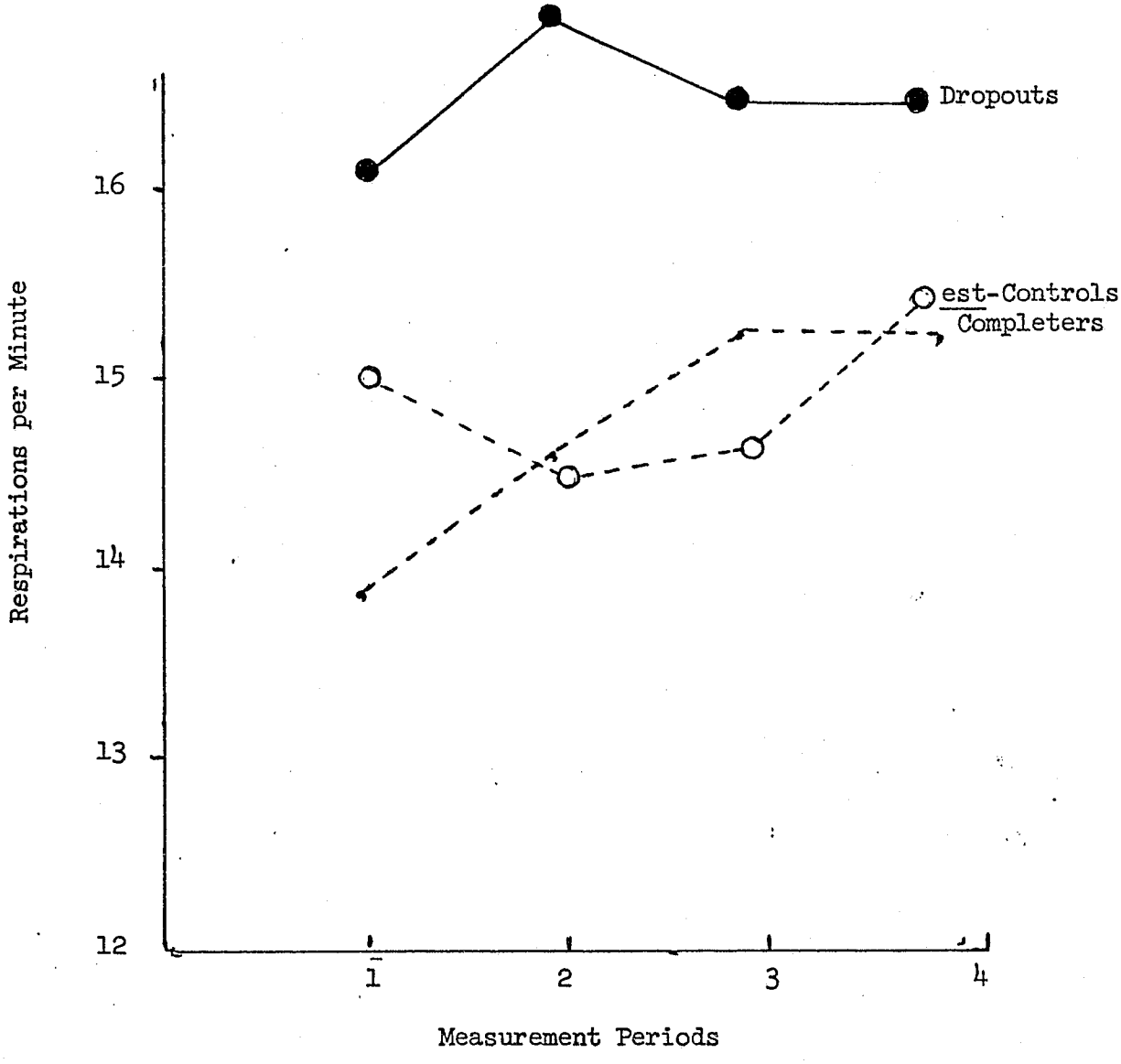


TABLE 22

RESPIRATIONS PER MINUTE: POSTTEST



training such as est may be under greater stress than those who do not volunteer. It is also interesting to note that the Dropouts, after training, demonstrated hand temperatures on the five measurement periods quite similar to those of the Non-volunteers while the est-Completers' posttest scores varied little from those of the est-Trainees (Completers and Dropouts combined prior to training) on the pretest. This is in contrast to self-reports of both state and trait anxiety. The est-Completers reported significantly less anxiety on these dimensions than did the Non-volunteers. Numerous other studies have found self-reports of emotional arousal to differ considerably from physiological measures of supposedly the same phenomena (see Hosford, 1980).

Posttest comparisons of the study indicate that completion of the est training generally did not result in the Completers responding differently from the Dropouts and the est-Controls on any of the four physiological measures taken.

# Chapter VI

## Behavioral Outcomes

As indicated in Chapter II, a variety of inmate behaviors routinely rated and recorded by institutional staff were selected to assess behavioral outcomes resulting from the est training. Because these measures did not require inmate cooperation to be collected (as did the psychological and bio-feedback assessments), data were available for most subjects in all groups. In some instances, data were not always filed by staff on some inmates, therefore, the number of subjects in each group varied according to the variable measured. Because behavioral data are routinely recorded and because staff were unaware of the particulars of the study as well as which variables were being assessed, missing data were assumed to be randomly distributed, thereby not biasing the outcomes of the study. The pre-est period consisted of the 3-months time duration immediately prior to beginning the est training, the post period constituted the 3 months immediately following the training, and the post-post followup consisted of the 12 months following termination of the training. Thus data for the post and post-post followup periods are not mutually exclusive. Due to the fact that many inmates were transferred in and out of the institution during the three assessment periods, each subject's score on a given variable was determined by dividing his score by the number of days present in the institution during that time period. Lack of funds, however, made it impossible to collect data on some variables for the Non-volunteers and for the 12-month followup for all groups.

### Incident Reports

Probably the most important of all behavioral measures of the institutional adjustments are Incident Reports. These reports are filed by staff when an inmate has been involved in a rule infraction such as verbal or

physical abuse toward staff or other inmates, self-inflicted mutilation, or use of drugs or alcohol.

Analysis of variance pretest comparisons of the Incident Reports revealed that the four groups (Completers, Dropouts, est-Controls, and Non-volunteer Controls) did not differ significantly from each other. Table 23 presents the mean score for each group for each assessment period.

TABLE 23

AVERAGE NUMBER OF INCIDENT REPORTS*

| GROUP | N | ASSESSMENT PERIOD | | |
|---|---|---|---|---|
| | | PRE | POST | POST-POST |
| Completers | 49 | .350 | .388 | .317 |
| Dropouts | 71 | .481 | .704 | .521 |
| est-Controls | 106 | .375 | .377 | .339 |
| Non-volunteers | 38 | .206 | .265 | .290 |

*Total number of incident reports divided by number of days present in the institution for that time period.

Although the number of incident reports did not differ significantly among the groups during the pretest period, the correlation coefficients between the pretest and each of the two post-training periods was significantly different from zero. Thus, analyses of covariance were used to examine the post and post-post assessment periods' data.

Analysis of covariance of the post and post-posttest data failed to reveal significant differences among the groups relative to the number of Incident Reports recorded for those two time periods.

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1 OF 2

Administrative Remedies

Administrative remedies consist of self-initiated written petitions which inmates submit to the Warden of the institution or the Regional Director of the Federal Bureau of Prisons requesting some particular course of action. The petitions can consist of complaints against staff; legal, medical or parole decisions; or institutional program assignments. However, an inmate may use the procedure to request any of a variety of remedies for personal concerns. The average number of administrative remedies submitted by each group for the three assessment periods is shown in Table 24.

Analysis of variance of the pretest data revealed a significant difference existed among the four groups, $F(3,260) = 2.71$, $p < .04$, with the Duncan's New Multiple Range Test showing that the Completers submitted more administrative remedies than each of the other three groups ($p < .05$). The Dropouts, est-Controls and Non-volunteers did not differ significantly from each other. However, analyses of covariance on the post and post-post assessment periods' data failed to disclose any significant differences

TABLE 24

AVERAGE NUMBER OF ADMINISTRATIVE REMEDIES

| GROUP | N | ASSESSMENT PERIOD | | |
|---|---|---|---|---|
| | | PRE | POST | POST-POST |
| Completers | 49 | .186 | .102 | .110 |
| Dropouts | 71 | .063 | .056 | .076 |
| est-Controls | 106 | .050 | .038 | .068 |
| Non-volunteers | 38 | .000 | .026 | .028 |

among the four groups. Thus, it is possible to conclude that the number of administrative remedies was not differentially affected by whether or not an inmate took or completed the est training.

Special Housing Unit

On occasion, it is necessary for institutional staff to confine an inmate in either administrative detention or disciplinary segregation to protect the individual from others or from physically assaulting himself, fellow inmates, or staff. Analysis of variance was used to examine the pretest data while analyses of covariance were used to analyze the data for the two post followup periods. No significant difference was found among the four groups relative to the number of confinements to special unit housing for any of the three assessment periods. Thus, on this criterion too, it is possible to conclude that enrolling in or completing the est training did not result in reducing or increasing the extent to which inmates were assigned to segregation. The mean score for each group for each assessment period is presented in Table 25.

TABLE 25

AVERAGE NUMBER OF COMMITMENTS TO SEGREGATION

| GROUP | N | ASSESSMENT PERIOD | | |
|---|---|---|---|---|
| | | PRE | POST | POST-POST |
| Completers | 49 | .082 | .082 | .116 |
| Dropouts | 71 | .237 | .282 | .226 |
| est-Controls | 106 | .129 | .129 | .120 |
| Non-volunteers | 38 | .000 | .157 | .125 |

Furloughs

Both overnight and one-day furloughs are awarded to inmates whose behavior, time left in the institution, and security level satisfy the requirements specified by the Bureau of Prisons. Analysis of variance applied to the pretest data showed that the four groups did not differ significantly in the total number of overnight furloughs received prior to the est training. However, the analyses of covariance did reveal a significant difference for the post-post period, $F(3,259) = 2.57$, $p < .05$. The Duncan's New Multiple Range Test showed that the Non-volunteers were awarded significantly more overnight furloughs during this period than any of the three other groups which did not differ from each other. The Non-volunteers also received more overnight furloughs during the post period but this difference failed to be significant, $F(3,259) = 2.44$, $p < .06$. The mean number of furloughs relative to number of days within the institution for each group and each assessment period is presented in Table 26.

TABLE 26

AVERAGE NUMBER OF OVERNIGHT FURLOUGHS

| GROUP | N | ASSESSMENT PERIOD | | |
|---|---|---|---|---|
| | | PRE | POST | POST-POST |
| Completers | 49 | .167 | .288 | .305 |
| Dropouts | 71 | .070 | .099 | .146 |
| est-Controls | 106 | .172 | .264 | .296 |
| Non-volunteers | 38 | .158 | .838 | .878 |

One-day furloughs. Similar analyses were used to determine whether the rate of one-day furloughs may have been differentially affected by

participating in or dropping out of the est training. An analysis of variance revealed no significant pretest difference among the groups. Analysis of covariance applied to the post and post-post periods data also resulted in non-significant differences. The means for the groups by assessment period are presented in Table 27.

TABLE 27

AVERAGE NUMBER OF ONE-DAY FURLOUGHS

| GROUP | N | ASSESSMENT PERIOD | | |
|---|---|---|---|---|
| | | PRE | POST | POST-POST |
| Completers | 49 | .598 | .327 | .581 |
| Dropouts | 71 | .171 | .496 | .351 |
| est-Controls | 106 | .321 | .604 | .440 |
| Non-volunteers | 38 | .368 | .895 | .704 |

Urine Analysis

Urine analyses are taken from time-to-time within the institution on both a random and possible-cause basis. These tests are important for monitoring institutional drug usage and positive analyses reflect adversely on the inmates' requests for future privileges, e.g., overnight furloughs and paroles. Analysis of variance and analyses of covariance applied to pretest and posttest data respectively revealed no significant differences among the groups for the three assessment periods. The means for the groups by assessment period are presented in Table 28.

Custody Level

In an attempt to determine whether the differences exist among the groups with respect to security risk within the institution, the custody

TABLE 28

AVERAGE NUMBER OF POSITIVE URINE ANALYSES

| GROUP | N | ASSESSMENT PERIOD | | |
|---|---|---|---|---|
| | | PRE | POST | POST-POST |
| Completers | 49 | .387 | .306 | .297 |
| Dropouts | 71 | .521 | .516 | .558 |
| est-Controls | 106 | .691 | .573 | .508 |
| Non-volunteers | 38 | .342 | .500 | .448 |

levels--before and after training--were analyzed. Table 29 presents the data used in this analysis. Due to insufficient funds, data were not collected on the Non-volunteers. Chi-squares applied to the data indicate that the three treatment groups did not differ significantly relative to custody level proportions prior to the est training nor during the three-month post followup period. Numerous variables, however, could account for the lack of differences in this area. For example, the three-month followup period may not have provided enough time for staff to have sufficient observations and other data on which to make new decisions regarding custody levels. Indeed, 70.97% of the Completers, 72.41% of the Dropouts, and 71.43% of the est-Controls received no change in custody level during the six-month period preceding and immediate following the est training. Lack of funds prohibited examining this variable again over the 12 months period of time. It is interesting to note that 22 of the 58 inmates (37.93%) who dropped out of the training experienced a one-step drop in their custody levels. That is, they were veiwed by staff as being less risks security-wise. In comparison, only 10 (23.81%) of those who

TABLE 29

CUSTODY LEVEL

| CUSTODY LEVEL | PRE-est | | | POST-est | | |
|---|---|---|---|---|---|---|
| | COMPLETERS (N = 42) | DROPOUTS (N = 59) | est-CONTROLS (N = 82) | COMPLETERS (N = 42) | DROPOUTS (N = 58) | est-CONTROLS (N = 77) |
| Community | 11 (26.19%) | 9 (15.25%) | 20 (24.39%) | 17 (40.48%) | 18 (30.51%) | 22 (26.83%) |
| Minimum | 18 (42.86%) | 19 (32.20%) | 23 (28.05%) | 16 (38.10%) | 20 (33.90%) | 28 (34.15%) |
| Medium | 11 (26.19%) | 25 (42.37%) | 32 (39.02%) | 7 (16.67%) | 18 (30.51%) | 27 (32.93%) |
| Close | 2 (4.76%) | 6 (10.17%) | 7 (8.54%) | 2 (4.76%) | 2 (3.39%) | 0 (0%) |

completed the training received reductions in custody level. A Chi-square analysis, however, failed to show that this difference could be attributed to factors other than chance $\chi^2(1) = 2.32$, $p < .11$.

Meritorious Service Awards

Meritorious service awards are granted to inmates who perform work of importance for the institution, e.g., food service, medical department, or to those who perform more routine tasks very well. These awards may be granted in one or both of two forms: meritorious good time (MGT) subtracts 3 days per month for the first 12 months and 5 days per month thereafter from the terminal date of the inmate's sentence; and performance pay is a cash stipend ranging from $10.00 - $75.00 per month.

Among those inmates for whom these data were available, 48.48% of the Completers, 53.33% of the Dropouts, and 57.41& of the est-Controls received meritorious service awards during the three-month period prior to the beginning of the est training. Of the 127 total awards recorded for the

three groups during this period, 36 were earned by the Completers, 31 by the Dropouts, and 58 by the est-Controls. The means for the three groups respectively were 1.88, 1.83, and 1.87. As would be apparent by visual analysis, Chi-square analyses revealed that the proportion of each group receiving meritorious awards did not differ significantly from each other.

The proportion of each group receiving meritorious service awards during the first followup period (three months after training) was not unlike that of the pretest period. Some 52.29% of the Completers, 58.67% of the Dropouts, and 51.88% of the est-Controls received awards during this period. Chi-square comparisons among the groups were not statistically significant suggesting that completion of the est training did not promote differential rates in the numbers of meritorious service awards given to inmates.

Honor Unit

Still another variable which may reflect changes in an inmate's attitude and/or behavior, is assignment to the honor living unit. In this unit, each individual has a key to his own quarters and has considerably more freedom of movement within/without the unit than do those assigned to other living quarters. Comparisons by group show that 87% of the est-Trainees and 70% of the est-Controls were housed in the Honor Unit before or after the training. Chi-square analyses, however, revealed no significant differences in the proportions of the Completers, Dropouts, and est-Controls being assigned to this unit during either the pre-est or post-est periods.

Education

The average number of years completed in formal schooling prior to incarceration are shown in Table 30, which shows high similarity among the groups. Analyses of variance also revealed that these differences were not

TABLE 30

YEARS OF FORMAL EDUCATION

| GROUP | N | M | RANGE |
|---|---|---|---|
| Completers | 31 | 11.03 | 8 - 14 |
| Dropouts | 28 | 10.21 | 3 - 13 |
| est-Controls | 49 | 11.00 | 2 - 16 |

statistically significant, $F(2,105) = 1.79$, $p < .17$. Other analyses also revealed that the groups did not differ significantly in terms of the number of educational courses enrolled in and/or completed in the institution prior to the est training nor during the three-month followup period immediately subsequent to the training. Thus, in terms of the training per se, it appears that participation in formalized schooling is not affected by selection of or completion of est training.

Sick Call

Although all sick call visits can hardly be labeled malingering, some are assumed by staff to be a way by which inmates avoid work assignments. Chi-square analyses of the proportions of each group having sick calls during the periods prior to and three-months subsequent to the est training resulted in no significant differences among the Completers, Dropouts, and est-Controls relative to this variable. The mean number of sick calls by number of days in the institution for each group is presented in Table 31.

Interpersonal Adjustment and Work Performance

Two criteria often used by staff to assess an inmate's adjustment during incarceration are Work Performance and Interpersonal Adjustment ratings. Although institutional policy specifies that ratings on each

TABLE 31

AVERAGE NUMBER OF SICK CALLS

| GROUP | N | PRETEST | POSTTEST |
|---|---|---|---|
| Completers | 30 | 3.97 | 3.50 |
| Dropouts | 29 | 3.93 | 4.14 |
| est-Controls | 47 | 3.36 | 2.92 |

inmate will be compiled and filed quarterly, many inmates did not have these data recorded in their individual files. Because the proportion of each group having Work Performance and/or Interpersonal Adjustment evaluation forms for the pretest and posttest time periods was similar, it was assumed (for statistical purposes), that the group means were equally affected by the missing data and that the data available was not significantly different from what the data as a whole would be had it been recorded.

Each inmate's Interpersonal Adjustment is rated by his unit staff on a five-point scale (see Appendix C). This scale was developed by Edwin J. Megargee at Florida State University for each of the following areas: (1) relations with other inmates, (2) relations with authorities and staff; (3) verbal and physical aggressiveness; (4) emotional control under stress; (5) cooperativeness and willingness to work for the common good; (6) dependability; (7) response to supervision; and (8) maturity or efforts to improve self and resolve problems. For each area of evaluation, analysis of variance was used to test for group differences. The area of aggressiveness (item number 3) was the only item differentiating the groups significantly and that occurred on the pretest only, $F(2,39) = 3.83$, $p < .03$. The

Duncan's post hoc analyses indicated that the est-Controls had been rated higher (more aggressive) than the Completers on this dimension while the Dropouts did not differ significantly from either of the other two groups. These results suggest that the Completers were rated by staff prior to the training as being somewhat less aggressive than the est-Controls. Table 32 provides the group means for both the pre- and post-data periods.

The Megargee Work Performance rating form is a five-point graduated rating with one representing poor and five representing outstanding performance for each of nine areas: (1) quality of work; (2) quantity; (3) initiative; (4) interest; (5) ability to learn; (6) dependability; (7) response to supervision; (8) ability to work with others; and (9) overall job proficiency (see Appendix D). Pretest and posttest means for each group are provided in Table 33. Analysis of variance applied to these data revealed no significant main effects or interactions occurred on any item for either the pretest or posttest periods.

Summary

Behavioral outcomes, in contrast to those which occurred in the psychological measurements, did not result in any posttest differences between the Completers and the est-Controls. Although the four groups (Completers, Dropouts, est-Controls, and Non-volunteers) did differ on some of the pretest measures, by controlling for these differences, the analyses of covariance did not reveal significant differences occurring after training. One notable exception was the fact that the Non-volunteers were awarded significantly more overnight furloughs during the one-year period following the est training than were the Completers, Dropouts, or est-Controls.

TABLE 32

MEGARGEE PERSONAL ADJUSTMENT MEAN RATINGS

| VARIABLE | PRE-*est* | | | POST-*est* | | |
|---|---|---|---|---|---|---|
| | COMPLETERS | DROPOUTS | CONTROLS | COMPLETERS | DROPOUTS | CONTROLS |
| Relations w/other men | 3.39 | 3.93 | 3.84 | 3.88 | 3.80 | 3.63 |
| Relations w/staff | 3.78 | 4.00 | 4.10 | 3.88 | 3.93 | 3.63 |
| Aggressiveness | 3.44 | 3.79 | 3.89* | 3.88 | 3.67 | 3.59 |
| Emotional control | 3.33 | 3.50 | 3.50 | 3.38 | 3.40 | 3.26 |
| Cooperativeness | 3.44 | 3.71 | 3.74 | 3.75 | 3.53 | 3.32 |
| Dependability | 3.78 | 3.86 | 3.79 | 4.00 | 3.53 | 3.53 |
| Response to supervision | 3.89 | 3.93 | 4.05 | 3.63 | 3.80 | 3.63 |
| Maturity | 3.86 | 3.78 | 3.58 | 3.75 | 3.40 | 3.63 |

*est-Controls > Completers, $p < .05$

TABLE 33

MEGARGEE WORK PERFORMANCE MEAN RATINGS

| VARIABLE | PRE-est | | | POST-est | | |
|---|---|---|---|---|---|---|
| | COMPLETERS | DROPOUTS | CONTROLS | COMPLETERS | DROPOUTS | CONTROLS |
| Quality | 4.00 | 3.72 | 3.56 | 3.67 | 3.74 | 3.78 |
| Quantity | 3.89 | 3.65 | 3.60 | 3.75 | 3.64 | 3.65 |
| Initiative | 3.81 | 3.78 | 3.47 | 3.67 | 3.67 | 3.69 |
| Interest | 3.96 | 3.84 | 3.65 | 3.88 | 3.67 | 3.88 |
| Ability to learn | 4.07 | 3.78 | 3.77 | 3.88 | 3.86 | 4.04 |
| Need for Supervision | 4.07 | 3.91 | 3.74 | 3.83 | 3.79 | 3.65 |
| Response to Supervision | 4.11 | 4.13 | 4.00 | 4.17 | 4.00 | 4.08 |
| Ability to work with others | 4.03 | 4.06 | 4.00 | 4.00 | 3.95 | 4.00 |
| Overall proficiency | 3.89 | 3.69 | 3.50 | 3.79 | 3.62 | 3.55 |

## Chapter VII

## Dropout Interviews

In order to determine why so many inmates dropped out, all Dropouts were asked to report for an individual interview. There was a 65 percent drop-out rate from the est training (97 out of 153). Twenty-nine (30%) responded and agreed to discuss their reasons for terminating. A structured interview form was used (see Appendix D) and the interviews were conducted by one of three counseling psychology graduate students who had a minimum of six months' experience working with and counseling inmates. Each individual was asked to rank order a list of 15 reasons as to why he dropped out. Table 34 provides the number of times each of the 15 reasons was selected regardless of its rank ordering. The five most often selected in order of frequency were:

| | | |
|---|---|---|
| 3) | Time conflicted with other things I had to do | 34.48 |
| 5) | Training had little relevance in my life | 13.79 |
| 4) | Didn't like being so controlled by others | 10.34 |
| 10) | I was too physically uncomfortable | 10.34 |
| 15) | "Other" (Responses given included statements such as, "I got what I wanted out of training," "Thought I got enough," and "It was cool") | 31.03 |

Of the 29 Dropouts interviewed, 19 (65.52%) indicated they would recommend est to other inmates and 25 (86.21%) responded that they would take it again if it were offered. Twenty of the twenty-nine (68.97%) said they wished they had completed the training. Four indicated that they felt persons could sometimes be hurt by est; twenty-three, however, indicated that est would not be harmful. Most (23 or 79.31%) responded that est was "a unique experience" and the same number thought est had "relevance to the real world." Not quite half (12 or 41.38%) responded "yes" to "Would it be

TABLE 34

REASONS SELECTED FOR DROPPING TRAINING BY NUMBER OF SESSIONS ATTENDED

| REASON | SESSIONS ATTENDED 0 | 1 | 2 | 3 | % |
|---|---|---|---|---|---|
| 1. Waste of time | 0 | 0 | 1 | 0 | .86 |
| 2. Too boring | 1 | 0 | 1 | 0 | 1.72 |
| 3. Time conflict | 10 | 5 | 0 | 1 | 13.79 |
| 4. Didn't like control | 3 | 1 | 0 | 1 | 4.31 |
| 5. Little relevance | 2 | 3 | 1 | 0 | 5.17 |
| 6. Got sick, couldn't attend | 0 | 1 | 1 | 0 | 1.72 |
| 7. Not as expected | 0 | 3 | 1 | 0 | 3.45 |
| 8. Too emotional | 0 | 3 | 1 | 0 | 3.45 |
| 9. Wouldn't do any good | 2 | 1 | 0 | 0 | 2.59 |
| 10. Physically uncomfortable | 4 | 4 | 3 | 1 | 10.34 |
| 11. Didn't want it in first place | 0 | 1 | 1 | 0 | 1.72 |
| 12. Didn't like FCI staff being there | 2 | 0 | 1 | 0 | 2.59 |
| 13. Inmate pressure | 0 | 1 | 0 | 0 | .86 |
| 14. Didn't like being made a fool | 1 | 1 | 0 | 1 | 2.59 |
| 15. Other - please specify | 6 | 3 | 1 | 0 | 8.62 |
| No response (one or more items left blank) | 29 | 9 | 4 | 0 | 42. |

a better world if all people took est training?" While 17 or 58.62% replied that est "makes you see yourself as you really are," and the same number indicated that est makes "you feel more responsible for your own behavior and thoughts."

Summary

Although they dropped out of training, most of the Dropouts viewed the experience and its value for others quite positively. The fact that all of the interviews were conducted by graduate students rather than est or prison staff personnel would suggest that these data may be more valid than otherwise would be expected.

## Chapter VIII

## Summary and Critique

In the beginning our intent was to complete both a clinical and statistical analysis of the data. However, the outcomes revealed such a paucity of statistically significant results that the clinical interpretation was aborted. In retrospect, it appears that the randomization procedures used to assign subjects to treatments went very well--the groups were very evenly matched regardless of variable. Too, the barriers of doing such a large study inside a correctional facility are not insurmountable and the situation offers such a bountiful supply of data that it more than offsets the obstacles encountered. The biggest, single impediment is the tremendous time involved, especially when no outside funds are available to provide the research assistance needed in collecting, recording, and analyzing literally thousands of pieces of data.

Relative to the treatment per se, it should be pointed out that the outcome variables evaluated in this study were those of concern to us and the Federal Bureau of Prisons and only secondarily those which the est organization proposes their training affects. Indeed, est trainers state in the introduction of every seminar, est does not teach you anything, it makes

> No claims, guarantees or promises of results. . . This would be inconsistent with the purposes of training. . . est training is about aliveness, satisfaction, fulfillment and the experience of completion (Cox, 1975).

In other words, the objectives of the training are not to promote specific changes in behavior or to provide psychotherapy. Rather, its purpose

> . . .is to transform an individual's ability to experience living so that those situations they have been putting up with or trying to change clear up just in the process of life itself. One result of this transformation of experience is an expanded capacity for moving through the barriers to expressing natural abilities in the areas of love, health, happiness, and full

> self-expression. As inmates begin to manifest their abilities in these dimensions one might expect 'improvement' in several areas: (1) their experience of physical health, (2) their experience of psychological health, (3) their interpersonal relationships, and (4) their degree of participation (est Letter, 1974).

Thus, while these objectives guided our selection of dependent variables evaluated, these outcomes may have little or no relevance to the intent of the training. As Baer and Stolz (1978) point out, the more practical and realistic are the outcomes considered, the more distant the study may be from the central goals espoused by est.

In this study, the psychological tests perhaps best reflect some measurement of these objectives in that the self-report instruments used probably come closest to est claims regarding transforming the lives of its participants. Why these self-report changes did not manifest themselves into changes in behavior we can only speculate. And why the lowered anxiety of the Completers was not substantiated on the physiological measurements is also open to question. Test results, being a form of self-report are affected considerably by response sets and the predispositions of individuals to maintain cognitive consonance. Thus, the "high" experienced by completing the training, may have influenced the self-reports but not physiological states of anxiety.

The fact that psychological changes did not manifest themselves in concomitant measurable changes in behavior may have been influenced by the fact that the usual est graduate followups were not provided. If, when one completes est training, that completion supposedly begins a lifelong experience rather than ends an experience, participation in consistent graduate "booster" treatments may be crucial toward maintaining cognitive and behavioral changes experienced during training. The usual est graduate is literally caught up in a never ending flow of material, communication, and

meetings wherein the principles of est are constantly reinforced. Theoretically, a graduate is never permitted to "regress" unless he/she takes a very resolute stand in severing the relationship. Thus, the usual est training is not a "one-shot" affair as are those offered by many other types of human potential groups. Unfortunately, this same continual relationship was not established in this correctional setting. est did schedule a series of five sessions in a graduate seminar entitled "About Money" following the ending of the training, but this constituted the extent of the followup graduate programming. In a prison setting, in which individuals daily experience considerable stress and depression, the lack of reinforcing those ideas gained during training which the graduate followups are designed to promote, may have greatly lowered any long-term effects which otherwise may have occurred.

Another serious problem in determining the effects of est in the prison setting is that two-thirds of the inmates who participated in the 1974, 1975, and 1977 training programs dropped out of training before completing the scheduled sessions. This fact raises the questions of what can be done to control the mortality rate and how to select those inmates who would most probably complete the program. A multiple regression equation, using attributes of successful graduates which differentiate them from dropouts could, of course, be devised. However, differences noted between Dropouts and Completers in the demographic data (Chapter II) are not substantial. Out of 19 different variables measured, only 6 were found to differentiate the groups significantly. Indeed, the Completers, varied significantly from the Dropouts only on average intelligence. However, they had, on the average, a higher (but not significant) level of formal education. Thus, the demographic variables measured in this study apparently are not those which could differentiate inmates who will complete or drop out of the training.

The data do indicate that within the prison confines est is one type of self-help program in which Blacks (and possibly other minority members) will participate. However, 114 scholarships were awarded to those who served as est-controls which the persons could use after release from incarceration. Thus far, not a single one has been turned-in for training even though the scholarship is now worth $300. Apparently, when programs such as est are offered free, motivation lapses, both inside and outside the prison.

Thus, we come to the end of our est experience. Whether the training is worth pursuing for inmates will be left to higher administration. We are, however, following up on the recidivism rates of inmates who have completed est training in comparison to those who desired training but did not receive it and to inmate recidivism rates in general. Completing the study was both intriguing and, at times, extremely frustrating. Lack of funding, we found to be by far our greatest problem. The Federal Bureau of Prisons and est cooperated with us in numerous and a variety of ways. However, we had to use hundreds of hours of our evenings and weekends to track down data or to correct mistakes in data recordings. For example, in many cases, an inmate's identification number would have digits reversed or number changes on one or more of the data sources used (i.e., institutional files, Federal Bureau of Prison files, inmate self-recorded test data, etc.), which provided numerous problems in getting the data ready for computer analyses. The lack of funds prohibited hiring research assistants to do the time consuming tasks which, though simple, are crucial to any scientific study.

After experiencing such a long and involved commitment to completing an objective evaluation of est training, we still find ourselves unable to improve on the description offered by Baer and Stolz (1978) in their excellent behavioral analysis of est. They state

> . . .the est organization should be viewed as a company that sells a procedure (or, in est terms, a context) with an admittedly unspecifiable, undependable, and unguaranteed intended product (the possibility of increased 'aliveness and satisfaction'), and an equally undependable, unguaranteed, possibly specifiable, but unintended set of byproducts (behavior change, self-control techniques, etc.) (p. 68).

Perhaps, each individual is affected differently in terms of his/her acquired knowledge, skills, and affective states at the time he/she undergoes the training. Whether these changes can be determined by using psychological, physiological, and behavioral measures commonly used in the behavioral sciences--such as those we used in this study--is certainly a viable question to consider. Outcomes such as "enlightenment" and "transformation" are impossible to define operationally much less measure scientifically. Other than the self-report psychological data, the results of this study would suggest that if inmate internal states of enlightenment did indeed occur, they were not subsequently manifested in changes in observable behavior or physiological functioning.

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# APPENDIX

Appendix A

## Clinical Interpretation of Psychological Scores of Staff Participants

There were 15 staff people interested enough in est that they volunteered to take the 60 hours of training on their own time. Eleven of them completed the training, including five women. Unfortunately, none of the staff was in the officer category. Each of them was tested both pre and post, in contrast to the inmates, half of whom were tested pre and half of of them post. The low number of staff did not permit a self-control group.

The MMPI profiles both pre and post were mostly normal, both in clinical scales or supplemental scales (there were only 16 deviant clinical scores out of a total of 220 and 16 deviant out of a total of 264 supplemental scores). Clinically judged, two changed in the positive direction and two changed negatively within an eight-week period. There was, of course, no behavioral way to determine the effect of est training.

On the State Trait Anxiety Inventory, there was again relative stability. In State Anxiety, they varied from a score of 29 on the pretest to a 32 on the post- (the variability was 21-57 on the pretest and 20-47 post-). In Trait Anxiety, the mean score on the pretest was 32 (variability was 24-53) and 34 posttest (variability, 24-49). The staff was no more anxious in either category than were the inmates, i.e., neither group was highly anxious.

The ratings on the semantic differential are somewhat more revealing.

| | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|
| | E | A | P | E | A | P |
| ACTUAL SELF | 6.2 | 5.0 | 5.1 | 6.4 | 5.5 | 5.8 |
| IDEAL SELF | 6.6 | 5.9 | 5.6 | 6.6 | 6.0 | 5.1 |

Typically, the IDEAL SELF is higher than the ACTUAL SELF and like the inmates (in contrast with college students and psychiatric patients), the discrepancy is fairly close. The IDEAL SELF remains relatively constant while the ACTUAL SELF is slightly altered (.8) in the posttest towards the ideal concept.

| | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|
| | E | A | P | E | A | P |
| MY LIFE BEFORE FCI | 5.9 | 5.5 | 5.4 | 5.7 | 5.4 | 5.2 |
| MY LIFE HERE AT FCI | 5.2 | 5.0 | 4.8 | 6.1 | 5.8 | 5.7 |
| MY LIFE AFTER FCI | 6.0 | 4.9 | 4.7 | 6.4 | 5.4 | 5.5 |

It seems evident in the pretest that life working at FCI is somewhat stressful, while life both before and after, at least in the evaluation dimension, is looked upon as more enjoyable. After est training, both actual and working and the anticipated life thereafter is viewed as more positive, active, and potent.

The INMATE is viewed by the staff as weak in all three dimensions, although it does improve somewhat (to neutral) after est training.

| | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|
| | E | A | P | E | A | P |
| INMATES WITH WHOM I WORK | 4.2 | 3.8 | 3.9 | 4.8 | 4.4 | 4.4 |
| MY WORK SUPERVISOR | 5.9 | 4.7 | 5.1 | 5.8 | 5.0 | 5.4 |

In contrast, the staff regards their WORK SUPERVISOR positively, and after est training regard him as being more potent and active.

| | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|
| | E | A | P | E | A | P |
| MY PHYSICAL HEALTH | 6.2 | 5.7 | 6.1 | 6.4 | 5.8 | 5.6 |
| MY PSYCHOLOGICAL WELL BEING | 6.1 | 5.5 | 5.9 | 6.2 | 5.7 | 5.9 |

Like the inmates, the staff also regard themselves on the average to be in good physical and mental health and even somewhat better after est training, particularly in psychological health.

| | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|
| | E | A | P | E | A | P |
| MY RESPONSIBILITY FOR LIFE | 6.4 | 5.6 | 6.1 | 6.4 | 5.8 | 5.6 |
| MY ABILITY TO BE BIGGER THAN MY PROBLEMS | 6.1 | 5.5 | 5.9 | 6.2 | 5.7 | 5.9 |

In comparison with the inmate scores, the staff has no question that they have both the responsibility and the ability to handle problems, either in the pretest or post-est training. In other words, in relation to RESPONSIBILITY, they do not suffer from the hypothesized "incarceration syndrome."

Finally, in the meaning of est, while not as high as the inmate population, the staff predicts that est will be somewhat meaningful and increases in all three dimensions of meaning as a result of est participation.

| | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|
| | E | A | P | E | A | P |
| est | 5.3 | 5.1 | 5.0 | 5.8 | 5.9 | 5.6 |

Appendix B

Dropout

est-Training Questionnaire

NAME_____ NO._____ UNIT_____ DATE_____ CAT._____

1. How many sessions of est training did you attend?
None_____ One_____ Two_____ Three_____ Four_____.

2. If you did not complete all four sessions, for what reason or reasons did you drop out? _____

_____

_____

3. Below are some reasons why others have dropped out of est. In addition to your reason(s) above, do any of these apply to your situation? If so, please put a "1" in front of that which is most important, "2," of second importance, etc.

a. _____waste of time

b. _____too boring

c. _____time conflicted with other things I had to do

d. _____didn't like being so "controlled" by others

e. _____training had little relevance to my life

f. _____I got sick and couldn't attend

g. _____didn't meet my expectations

h. _____too emotional for me, made me feel uncomfortable

i. _____didn't think it would do any good

j. _____I was too physically uncomfortable

k. _____I didn't want it in the first place

l. _____I didn't like taking it with staff

m. _____pressure from other inmates

n. _____didn't like being made a fool

o. _____other: please specify

_____

_____

4. Would you recommend est to other inmates? Yes___ No___

5. Would you take est again if it were offered? Yes___ No___

6. If you did not complete the training, do you wish now that you had? Yes___ No___

7. Do you feel that you or others could sometimes be hurt by est? Yes___ No___

8. In your opinion:

a. is est a unique way of breaking down the barriers among people? Yes___ No___
b. do situations in est have relevance to the real world? Yes___ No___
c. would it be a better world if all people took est training? Yes___ No___
d. does est make you see yourself as you really are? Yes___ No___
e. does est make you feel more comfortable for your own behavior and thoughts? Yes___ No___

Florida State University

Inmate's Name _____ Unit _____

Number _____ Rater _____

Period Covered _____ Date _____

**CIRCLE THE BEST STATEMENT IN EACH AREA. RATE THE INMATE'S OVERALL PERFORMANCE FOR THIS PERIOD– NOT HIS BEST DAY OR HIS WORST DAY.**

1. RELATIONS WITH OTHER MEN

a. Very poor. Hostile. Antagonistic. Disliked by most men.

b. Doesn't make friends easily. Rubs others the wrong way, or keeps to himself. Not popular.

c. Satisfactory. Gets along all right with most men but not all. Has his good and bad days.

d. Gets along well with almost everyone.

e. Excellent. Cooperative and congenial. Gets along very well with everyone. Very popular. An asset to the dorm.

2. RELATIONS WITH AUTHORITIES AND STAFF

a. Very negative. Defiant, disrespectful, hostile to officers or staff.

b. Negative, Sullen or resistive. Passive aggressive.

c. Fair. Not real warm or friendly but not hostile or sullen either. Neutral attitude.

d. Good. Friendly and cooperative. Gets along with authorities better than most.

e. Excellent. Very friendly, cooperative, and congenial. Never any difficulties. Rarely see a man who gets along this well with staff.

3. VERBAL AND PHYSICAL AGGRESSIVENESS

a. Extremely hostile and aggressive. Looks for trouble. Harasses others. Seems to be spoiling for a fight.

b. Hostile to others. Touchy. Responds aggressively when provoked or frustrated but doesn't look for trouble.

c. Generally doesn't carry a chip on his shoulder and is not hostile but if pushed will respond with verbal or physical aggression.

d. Is not aggressive unless extremely provoked. Good control of his temper. Does not carry any grudges.

e. Very passive and meek. Will not respond with verbal or physical aggression even when strongly provoked by others.

4. EMOTIONAL CONTROL UNDER STRESS

a. Very emotional. Hothead. Blows up or falls apart at the slightest bit of stress.

b. Little control. Usually upset, angry or worried about something.

c. Average emotional control. Shows the usual amount of feeling for each situation.

d. Very calm and cool. Has above-average control over his emotions even in tough or trying situations.

e. Super-controlled. Never lets his emotions show, no matter what. "Has ice water in his veins."

5. COOPERATIVENESS; WILLINGNESS TO WORK FOR COMMON GOOD

a. Very poor. Never volunteers for chores. Never puts himself out for others. Won't help unless he has to.

b. Below average. Has to be prodded to do his share. Never volunteers.

c. Average. Pulls his own weight but no more.

d. Above average. One of the more cooperative men in the unit.

e. Outstanding. Always does more than his share to help others. Always volunteers for chores. Sacrifices his own convenience for the sake of others.

6. NEED FOR SUPERVISION; DEPENDABILITY

a. Needs constant supervision. If left unsupervised, will always foul up. Cannot be relied on. Undependable.

b. Needs close supervision. Not very dependable.

c. Average. Can be relied on for certain things but must be supervised for others.

d. Needs little supervision. Generally dependable.

e. Completely dependable. No supervision required.

7. RESPONSE TO SUPERVISION

a. Very poor response. Resents supervision. May argue with officer. Sulks or gets hostile if criticized.

b. Resists or ignores suggestions. Keeps on making the same mistakes. Criticism has little effect on him. Less antagonism than "a".

c. Fair. Does not argue or sulk but doesn't make the most of supervision. May try to do better for a while but often forgets.

d. Good response. Tries to do better.

e. Excellent. Makes the most of criticism and suggestions. No hostility or resentment. Eager to do better.

8. MATURITY; EFFORTS TO IMPROVE SELF AND RESOLVE PROBLEMS

a. Very immature, irresponsible, juvenile person who makes no effort to resolve his problems. Little thought for future. Often breaks rules and gets into trouble.

b. Below average maturity. Has little awareness of his problems. Blames others. Doesn't make much effort to improve self or learn skills. Impulsive.

c. Average maturity for this population. Says he wants to improve and do better, but doesn't work very hard at it. May break rules occasionally.

d. More mature than most. Is making an effort to improve. Rarely in trouble. Tries to plan for future but less realistic than "e".

e. Very mature. Responsible, realistic person. Makes careful plans to take the most advantage of program and improve his skills and character. Realistic appreciation of his problems and well-thought through goals. Almost never in trouble.

# WORK PERFORMANCE RATING FORM

Inmate's Name _____ Work Assignment _____

Number _____ Unit _____ General Comments: _____

Month & Year _____

CIRCLE THE BEST STATEMENT IN EACH AREA. BASE YOUR RATINGS ON THE INMATE'S **OVERALL** PERFORMANCE FOR THIS RATING PERIOD — NEITHER HIS BEST DAY NOR HIS WORST DAY.

**1. QUALITY OF WORK**

1. Unsatisfactory. Makes more errors than he should for his level of training. Work must be redone.
2. Fair. Careless; makes mistakes and does not check work. Should do better work.
3. Satisfactory. Makes some mistakes but no more than expected at this level.
4. Good. Makes fewer mistakes than most inmates at this level of training. Does Journeyman level work.
5. Outstanding. Does superior work.

**2. QUANTITY OF WORK**

1. Unsatisfactory. Lazy, wastes time, goofs off.
2. Fair. Does just enough to get by. Has to be prodded occasionally.
3. Satisfactory. Works steadily but does not push himself.
4. Good. Willing worker. Does a full day's work and wastes little time.
5. Outstanding. Drives himself exceptionally hard all the time.

**3. INITIATIVE**

1. Unsatisfactory. Always waits to be told what to do. Needs help getting started.
2. Fair. Usually relies on others to tell him what to do.
3. Satisfactory. Can adapt to changes in routine. Will start work without waiting to be told.
4. Good. Can plan his own work well. Acts on his own in most things. Doesn't wait to be told what to do.
5. Outstanding. Has good ideas on better ways of doing things.

**4. INTEREST; EAGERNESS TO LEARN**

1. Poor. Shows no interest in job. Regards job as a drag or waste of time.
2. Fair. Shows minimal interest but not very eager to learn.
3. Satisfactory. Shows average amount of interest. Wants to learn his own job but does not put forth extra effort.
4. Good. Above-average interest in job. Asks questions about his own work and related work. May do extra work to improve skills.
5. Outstanding. Eager to master job. Wants to know everything there is to know about it. May read up on his own time or volunteer to do things that will improve his knowledge.

**5. ABILITY TO LEARN**

1. Poor. Has very low aptitude and is very slow to learn. Even when he is given extra instruction he is unable to learn, no matter how hard he tries.
2. Fair. He is pretty slow but if he tries he eventually will pick up the skills. Needs more instruction than most.
3. Average. No slower and no faster to learn than most inmates. Requires average amount of instruction.
4. Good. Learns rapidly. Good memory. Rarely makes the same mistake twice.
5. Outstanding. Very quick to learn. Excellent memory. Is learning job much more rapidly than most inmates assigned here. Never makes the same mistake twice.

**6. NEED FOR SUPERVISION; DEPENDABILITY**

1. Needs constant supervision. If left unsupervised will foul up, get in trouble, or wander off. Undependable.
2. Needs closer supervision than most. Not very dependable.
3. Average. Can be relied on for certain things but must be supervised by others. Usually prompt and dependable.
4. Needs little supervision. Good record of dependability and promptness.
5. No supervision required. Completely dependable in all things.

**7. RESPONSE TO SUPERVISION AND INSTRUCTION**

1. Poor. Resentful and hostile. May argue with supervisor.
2. Fair. Resists or ignores suggestions.
3. Satisfactory. Generally does what he is told without any fuss.
4. Good. No hostility or resentment. Tries to improve.
5. Outstanding. Makes a real effort to please the instructor. Does exactly as he is told.

**8. ABILITY TO WORK WITH OTHERS**

1. Poor. Negativistic, hostile, annoying to others.
2. Fair. Doesn't make friends easily. Has some interpersonal difficulties.
3. Satisfactory. Gets along OK with most co-workers and is accepted by them.
4. Good. Friendly, congenial, helpful; others like to work with him.
5. Outstanding. Gets along well with everyone. Very popular.

**9. OVERALL JOB PROFICIENCY**

Based on this inmate's overall performance during this work period, if this inmate was an employee of yours in the free world would you:

1. Fire him or lay him off?
2. Transfer him to a less demanding job at a lower pay scale?
3. Continue to employ him but without a raise or promotion this time?
4. Raise his pay but keep him at the same job?
5. Promote him to a more demanding job at a higher pay rate?

_____ _____

Supervisor's signature Date

_____

Inmate's signature

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cc: Inmate's Case Manager.



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END