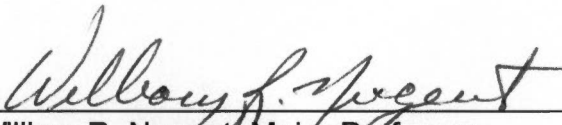
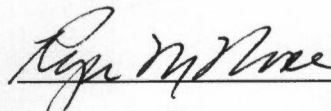
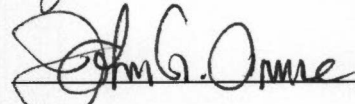
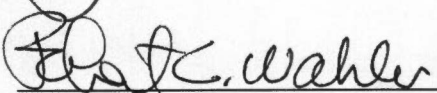


To the Graduate Council:

I am submitting herewith a dissertation written by Beverly McKee entitled "A Formative Evaluation of an Empathy Training Model." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Social Work.


William R. Nugent, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:


Associate Vice Chancellor and
Dean of the Graduate School

**A FORMATIVE EVALUATION
OF AN
EMPATHY TRAINING MODEL**

A Dissertation

Presented for the

Doctor of Philosophy

The University of Tennessee, Knoxville

Beverly McKee

May 1998

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CHAPTER I.

INTRODUCTION

Opinions vary regarding an understanding of what empathy is. From a social learning theory perspective, empathy is essentially a skill which can be developed; that is, people are capable of learning to understand how others feel and how to describe others' feelings accurately. However, like other psychological qualities, empathic capacity varies; some researchers contend that empathic capacity is normally distributed, implying that for unclear reasons some people are innately endowed with a higher capacity (Goldstein & Michaels, 1985, p.192). There is some evidence supporting a genetic base for emotional empathic tendency (Rushton, et al, 1986). Regardless of the differing opinions on the source of empathy, it has gained important recognition recently.

The popularity of Goleman's (1995) book Emotional Intelligence indicates a new look at the importance of emotional and social skills in defining what it means to be "smart." Among the people skills needed for emotional intelligence or success is **empathy** (Gibbs, 1995, p. 65). Goleman sees practical application of "remedial emotional education" for how

companies hire personnel, how couples can increase the likelihood that their marriages will endure, how parents should raise their children, and how teachers should teach.

Empathy is a skill which is deemed important in the helping professions. Empathy literature is found in the fields of medicine, nursing, counseling, education, communication, psychology, and social work. Additionally, a review of the literature indicates that empathy training has been used with a variety of populations and problem areas including the following: developmental programs for preschoolers, parent training of school age mothers, telephone counseling such as crisis workers and hotline volunteers, group therapy, employment interviewing, volunteers in nursing homes, aggressive children and adolescents, perpetrators and rapists, prevention programs of interpersonal violence, conflict resolution, marital relationship therapy, job burnout, teaching vocational ethics, and enhancing interpersonal relationships. Clearly, empathy is a skill which has been viewed as important with a wide variety of populations, problems and settings.

The social worker's empathic skill in the social worker-client relationship has been emphasized in social work curricula and practice for a long time. In 1946 Charlotte Towle stressed that empathy was essential in

creating a “warm relationship in which the worker feels into and with the client without feeling like him” (Perlman, 1969, p. 104). Most recently the benefits of empathy skills for social workers have been correlated with increased effectiveness as defined by prevention of job burnout. Social workers often battle against fatigue, frustration, low pay, demanding hours, and vulnerable populations all which can contribute to feelings of burnout (Beechem & Comstock, 1997). Empathy remains an important skill in social work practice.

Most all psychotherapy and counseling texts emphasize the role of empathy in building a successful relationship with clients and patients (Corcoran, 1982b). The relationship or therapeutic alliance has been shown important in the outcome of therapy across a range of psychotherapies (Krupnick, et al, 1996), and since empathy is crucial in establishing this therapeutic relationship, empathy remains an important construct for study.

Many of the “master” psychotherapists espouse importance to the role of empathy in therapeutic and interpersonal relationships. Of the eight goals of strategic family therapy, #4 is “to encourage empathy” (Cloé Madanes, p. 45). In Ericksonian family therapy empathy is one of the primary techniques used in the “joining phase of therapy” (Lankton, et al, p. 264). In John

Gottman's significant research on marital success, Why Marriages Succeed or Fail, he empirically supports four strategies or "keys to improving your marriage." Strategy #4 includes a detailed description of empathic skill. For example, "Validation is simply putting yourself in your partner's shoes and imagining his or her emotional state. It is then a simple matter to let your mate know that you understand those feelings and consider them valid, even if you don't share them. Validation is an amazingly effective technique" (Gottman, p. 195).

Another marital approach using family of origin material, emphasizes ten criteria which have implications for a healthy marriage. Number three states: "they have developed a more empathic understanding of their mate" (Framo, p. 140). Ivan Boszormenyi-Nagy in his contextual family therapy approach teaches a skill called "multidirectional partiality" which includes "directing empathy" in the family session (Boszormenyi-Nagy, 1981, p. 178). Carl Whitaker states that developing an empathic relationship begins in the assessment phase of therapy (Whitaker and Keith, 1981, p. 197). In problem-centered systems therapy with the family, the dimension of affective involvement of family members is categorized into a range of six levels: "Empathic involvement is viewed as the most effective form of affective

involvement ” (Epstein & Bishop, p. 464). These are just a few examples of the importance that empathy is said to play in the psychotherapy literature.

Aspects of Empathy

The Researchers' Definitions of Empathy

As a construct, empathy has undergone definitional scrutiny. The **current**, major researchers have similar but different definitions; the underlying similarity appears to be the emphasis on an **affective** response rather than a cognitive process. A few examples are as follows:

- (1.) “The vicarious sharing of another person’s experience” (Feshbach, 1982, p. 319).
- (2.) “An affective response more appropriate to someone else’s situation than to one’s own” (Hoffman, 1987, Chap.4).
- (3.) “Other-oriented feelings of concern, compassion, and tenderness experienced as a result of witnessing another person’s suffering” (Batson, Fultz, & Schoenrode, 1987, Chap. 8).
- (4.) “An affective state stemming from apprehension of another’s emotional state or condition and which is congruent with it” (Eisenberg & Miller, 1987, Chap. 13).

Empathy Training

The primary realms of contemporary empathy training have been in psychotherapy, education, and parenting with the majority of theory development and research in the psychotherapy arena (Goldstein & Michaels,

1985, p.196). Much of the earlier empathy training was geared specifically for counselors and used feedback and ratings of judges regarding the counselor's empathic responses either in mock counseling sessions or on written reactions to client's problems/situations (Natale, 1972, p. 44). Counselor training programs have traditionally used didactic instruction, modeling, practice, and reinforcement feedback (Corcoran, 1982).

A variety of other methods of teaching empathy have been used. Picture story, film, and role playing have been used with children in particular (Kremer & Dietzen, 1991; Gladstein & Gladstein, 1983; Grace, et al, 1995). Additional methods include: increasing critical thinking (Natale, 1972), taking the perspective of characters in stories and film (Omdahl, 1995), role-playing (Goud, 1975; Feshbach, 1975, Beechem & Comstock, 1997), sensitivity training, stimulating a mental representation of the subject, didactic and experiential training with a role model of empathy, counselor supervision techniques, immediate feedback (Natale, 1972; Hodge, 1978; Goldstein & Michaels, 1985), viewing counseling films (Lomis, 1985), problem solving games, listening to and making tape recordings, and group discussions (Feshbach, 1983, Beechem & Comstock, 1997). Programs have also used combinations of these techniques; however, no one approach or

combination has been tested or shown most effective due to definition and measurement issues in empathy research.

The Social Importance of Empathy: The Prosocial Link

Empathy is important socially. Theories and empirical research have consistently supported a link between empathy and prosocial development (Eisenberg, 1986; Feshbach, 1982a; Batson & Coke, 1981; Hoffman, 1981; Eisenberg & Fabes, 1990). Empathy training that increases the overall prosocial behavior of individuals could potentially be used in a variety of ways, from treatment issues difficult clients to marriage enrichment programs. The inverse relationship between empathy and aggression (Feshbach, 1982; Miller & Eisenberg, 1988) provides a particularly poignant question for study with treatment populations. A number of other important questions can be asked. Can empathy training reduce aggression? Do parental empathy skills influence parenting ability? Does empathy training produce better psychotherapists? Although important empathy research has been conducted, problems which have been identified have not yet been fully addressed.

Statement of the Problem

No specific, short term model of empathy training has been developed and tested with the general adult population even though researchers have established a link between empathic skills and the art of helping and caring for others. Additionally, as a major component of “emotional intelligence,” it is argued that empathy enhances successful living in general (Gibbs, 1995). A large body of research suggests that more empathic people tend to engage in more altruistic behaviors, are less aggressive, are more affiliative, score higher on measures of moral judgment, and are more pleasant to be around (Mehrabian, Young, and Sato, 1988). The questions of how to best define empathy, teach empathy, and measure empathy remain unanswered. There appears to be a need for further development of empathy training, especially short-term, easily taught models which can be used with adolescents and adults.

Purpose of this Study

The purpose of this research was to conduct an evaluation study of a short-term formative empathy training model, ascertain its effectiveness as currently developed in improving affective and cognitive empathy, and to suggest improvements through empirical study. There are examples of

programs of empathy enhancement for counselors and children but not for the general adult population. Conceivably, a short-term, effective model could be used with adolescent and adult populations to increase prosocial behavior.

Objectives of this Study

1. to test the effects of a short-term empathy training program on affective empathy skills
2. to test the effects of a short-term empathy training program on cognitive empathy skills
3. to replicate research that suggests women and men can equally increase their empathy skills even though women initially score higher (Eisenberg and Lennon, 1983)

CHAPTER II.

LITERATURE REVIEW

What Is Empathy?

Historical Roots

The concept of empathy has been debated as a social and moral issue for centuries by philosophers, clerics, and psychologists. Its historical definition was always broad and difficult and often related to religious, moral, and altruistic issues. In late nineteenth-century Germany, *Einfühlung* (translated as *sympathy* with feeling when viewing an aesthetic object) had its origins in the study of aesthetics but by early twentieth-century, American experimental psychology borrowed the concept and translated it as **empathy** (Wiske, 1987, p. 18).

Definition Problems

Early research on empathy had several problems, including construct definition and measurement. Construct definition difficulties have plagued the research because of the confusing ways of looking at empathy. Evolving from Dymond's (1949) cognitive role-taking approach, empathy was defined as

imaginatively taking the role of another in order to understand and specify that person's thoughts, feelings and actions. Another definition of empathy was suggested by Stotland (1969): the vicarious emotional responding to the perceived emotions of other (Mehrabian, Young, & Sato, 1988). Thus, early scholars' definitions have ranged from an emphasis on cognitive empathy to an emphasis on affective empathy with confusions about the differences between sympathy and empathy and personal distress (Eisenberg and Strayer, 1987, Chap. 1; Batson, Fultz, & Schoenrade, p. 167 in Eisenberg and Strayer). "In reality, there is no correct definition of empathy, just different definitions" (Eisenberg & Strayer, 1987, Critical Issues..., p. 5). It has only been since the 1950's that the construct of empathy has even received empirical interest, especially in the developmental context, across the life-span (Batson, 1990; Moore, 1990).

Empathy has recently been understood as encompassing both affective and cognitive components, similar to the way Smith in 1759 delineated differences between intellectual sympathy and instinctive sympathy (Davis, 1980). Clarification of the unidimensional construct into both affective and cognitive components is a trend towards a more sophisticated understanding of empathy. As an intellectual process, cognitive role-taking involves social skills

and social perceptiveness. Emotional empathy is based more on a “primitive” level of interpersonal process; similar to a process of contagion, the emotional response is much the same as another’s response (Mehrabian, Young, and Sago, 1988). Definitions vary with the level of empathy development the researcher tests, i.e. children usually have less developed cognitive empathy skills than adults. It is this construct dimensionality of empathy which has caused most of the research problems.

Measurement Problems in Research

The problems with measurement of empathy have been driven by the definition problems. Various instruments have measured a unidimensional definition of empathy; therefore, the majority of empathy research is either on cognitive empathy or affective empathy or a composite of both (Bryant, 1982; Davis, et al, 1987; Chlopan, et al, 1985). Although Carl Rogers defined empathy as “feeling into” and sharing another’s feelings, his research measured cognitive empathy (Strayer, 1987, p. 226). All three of the previously best known empathy scales (the Hogan, the Mehrabian & Epstein, and the Feshbach & Roe) all produce a **single** empathy score from measures of both affective and cognitive components of empathy (Davis, 1980). In some of the literature personal distress has been confused with sympathy and empathy (Eisenberg &

Strayer, 1987, Chap. 1, p. 7; Batson, Fultz, & Schoenrade) which has led to difficulty comparing data across studies.

Towards a New Definition: Multidimensional

Because of the difficulties in understanding and defining empathy, the trend of current research is taking a multidimensional approach (Hatcher, et al, 1994). Davis, who defines empathy as a “reaction to the observed experiences of another” (1983, p. 113), breaks empathy into four related constructs including the earliest affective one, personal distress. The four constructs are the basis of the subscales of his measurement instrument, the Interpersonal Reactivity Instrument; the constructs are fantasy, personal distress, perspective taking, and empathic concern.

Scholars’ understanding of the earliest affective construct alone highlights the complexity of defining empathy. Eisenberg & Strayer (1987, Chap.1, p. 7) define **personal distress** as “experiencing an aversive state such as anxiety or worry that is not congruent with the other’s state and, leads to a self-oriented, egoistic reaction or concern.” Davis states that the personal distress score decreases with age since it measures a precursor to empathy; this supports Hoffman’s theory of a developmental process of empathy. Hoffman’s definition of early empathy is very similar to personal distress:

egoistically motivated assisting, that is, prosocial behavior motivated by the desire to relieve one's own uncomfortable internal state by reducing contact with the aversive, arousal-producing cues emanating from the other.

Davis emphasizes that the content domain of the four subscales fits the "general definition of empathy as a reaction to the observed experiences of another" (Davis, 1983, p. 114). Theorists and researchers have identified and studied all of these dimensions of empathy. For example, Stotland et al (1978) found that the tendency to fantasize influences emotional reactions to others and impacts helping behavior. Coke et al (1978) included a similar set of variables, including perspective taking, empathic emotion, and personal distress, to study the link between emotional reactions and helping behavior. Hoffman's developmental model (1977) of prosocial motives states that perspective taking mediates the developmental change from egoistic emotional reactions (personal distress) to an other oriented emotional reaction (empathic concern). Thus, as divergent as the four subscale constructs might appear, they "accurately reflect the variety of reactions to others that have at some time been referred to as empathy" (Davis, 1983, p. 114).

Biological Precursors of Empathy

Studies indicate empathy to be a construct with precursors for development (such as self regulation) and varying developmental pathways of expression (Brothers, 1989; Hoffman, 1981; Zahn Waxler & Radke-Yarrow, 1990; Eisenberg and Fabes, 1990). Primitive affective signaling is considered by ethological developmentalists to be at the root of the development of empathy in mammals. Such behavior includes alarm songs or calls, thumping, freezing, schooling behavior of fish, flocking and mobbing behavior of birds, and herding behavior of mammals. “All such behaviors involve **mimicry** and **affective communication**” (Plutchik, 1987, p. 40, bold added.). When affective signaling is made in response to a perceived threat, group members who have not sensed the danger but have sensed the alarm signal, instinctively experience the same danger feelings and behave in the same way. In this evolutionary sense, empathy contributes to the “adaptive patterning of group behavior and increases the chances of individual survival” (Plutchik, 1987, p. 41) and serves to bond individuals to one another, especially mothers to infants.

Like the evolutionary origins of empathic concern found in the brain organization of primates, these precursors of mature empathy are indicated in infants’ responses to facial expressions and affective stimuli. Infants have pre-

cognitive biological predispositions for shared emotional experience (Bowlby, 1968). An example of an infant's auditory emotionally shared experience is reactive crying, whereby the infant behaves with arousal and crying in response to other neo-natal cries in contrast to white noise or crying of older children (Sagi & Hoffman, 1976). The facial feedback theory for the communication of emotions includes the reading and mimicry of facial expressions between the newborn and the caregiver as the basis of communication between them (Zajonc, 1985; Izard, 1990). Thus an infant's emotions have adaptive consequences for survival; communication signals attract a protective adult to a vulnerable infant (Plutchik, 1987, p. 43). Bowlby (1969) believes that it is these emotionally shared experiences between mother and infant which essentially moderate attachment behaviors. Brothers and Hoffman continue the study of these neurophysiological processes, both the auditory and visual pathways (Moore, 1990).

Models of Empathic Development

Few researchers have theorized models of how empathy develops beyond the instinctual level in infants. The study of developmental affective empathy has been primarily with infants, children and the biological feedback of emotional recognition and responsiveness, "emotional contagion." Strayer

(1987, p. 227) describes the affective phase as follows:

The reverberation phase, the core of the empathic experience, is less a function of voluntary deliberative **cognition** than a 'free association' or loosening of self-other boundaries in allowing stimuli impinging on the other to be experienced by the self. (Bold added.)

In adults, however, the affective focus to empathy is on the shared affect but with a required, well differentiated self-other framework. The models address the various stages of empathy development.

The two major developmental models of empathy are those of Hoffman (1984a) and Feshbach & Feshbach (1982), and they have focused on the affective aspect of empathy when most other early researchers focused on cognition. However, they differ in their interpretation of the role cognition plays. Hoffman places less emphasis on the cognitive component and more on its **interaction** with emotion compared to Feshbach & Feshbach who highlight a separate, cognitive mediation.

Hoffman formulated a theory of empathy development (1984a) based on affective empathy and its underlying processes, i.e. the match which is responsible for having a feeling fitting another's situation more than one's own. Empathy is an affective response but with both cognitive and affective components (Hoffman, 1984a, p. 103). He focuses both on emotion and an

interaction of affective and cognitive processes all within a developmental framework, (1984a, p. 126). The developmental aspect is based on the biological predispositions of emotionally shared experiences which evolve with increasing sophistication.

It is the arousal modes which make up the affective component. Hoffman describes six modes of empathic arousal: primary circular reaction, classical conditioning, direct association, mimicry, language-mediated association, and role taking. The first one called primary circular reaction (a term describing reactive crying in newborns) is thought to be an innate, primitive precursor of empathy which usually drops out after infancy; however, it is the resulting co-occurrence of distress during a primary circular reaction which may contribute to the later development of empathic distress. The sixth mode, perspective taking, is deliberate and may be experienced less frequently; parents and therapists may purposefully try to increase their effectiveness with perspective taking/role taking. "The intermediate four modes, however, enter at different points in development and probably continue to operate throughout life" (Hoffman, 1984a, p. 106).

The second mode is classical conditioning. This direct arousal results from observing affective cues from another and then feeling the same. For

example, if a mother is tense or anxious, she may stiffen her body or speak in a tense tone of voice which may distress the baby she's holding. At a later time, the mother's affective cues connected with her anxiety (facial or verbal expressions) such as a frown or a tense tone of voice may evoke a conditioned response in the baby in the absence of holding the infant.

Direct association is the third mode and includes reacting to cues from another which evoke memories of past situations and feelings. For example, when observing another's experience, one might remember the same experience and feel aroused. The fourth mode is an often neglected concept of empathy: mimicry. After imitating another's slight movements (i.e. facial expressions, posture, or overt behavior), an internal kinesthetic cue allows for understanding and feeling the same thing. Smiling can be mimicry. Because this concept is so much like a primitive instinctive response, it has been largely ignored in the literature.

The fifth mode is language-mediated association and is based on past memories of distress. This arousal mode is fairly advanced because it requires semantic information processing. Language is used to communicate the feeling. An example is "My mother just died." If a person has already experienced this situation, then the words can evoke the memory of what it felt like. In

summary, arousal modes are influenced by the available cues and the level of processing, i.e., responding to semantic meaning rather than physical expressions. Arousal modes are cue dependent; for example, if expressive cues are salient, then mimicry may be the primary arousal mode. Additionally, multiple cues can increase the level of arousal (Hoffman, 1984a, p. 107).

The cognitive component results from a transformation of the affective experience through an awareness that the occurrence is with someone else, a cognitive sense of others. There are four stages of the development of “other awareness”:

1. total self-other fusion (first year)
2. awareness of other first as separate physical entity (1-2 years old)
3. awareness of existence of others having independent internal states (ages 2 and older)
4. awareness of others having personal identities beyond the immediate (late childhood or early adolescence)
(Hoffman, p. 111)

The affective-cognitive synthesis is a developmental process, a coalescence of vicarious affect and cognitive sense of the other, “other awareness.” According to Hoffman, affective empathy is the interaction of affective and cognitive components despite the differences in the processes underlying their development; that is, they tend to be experienced together rather than separately.

Hoffman states that empathy appears to be a universal, primarily

involuntary response; in other words, if one “attends to the relevant cues, one responds empathically -- that had survival value in human evolution” (p. 107). Most of the arousal modes are the result of shallow levels of cognitive processing: sensory registration, simple pattern matching, and conditioning. Figure 1 provides a visual interpretation of the details of Hoffman’s model of affective empathy (Hoffman, 1984, pp.103-130).

What Hoffman refers to as the early phases of empathy, the Feshbachs refer to as a precursor to empathy, not empathy itself (Eisenberg & Strayer, 1987, Critical Issues, p. 6). The Feshbachs agree with Hoffman’s biological base of empathy but emphasize a cognitive mediation as a pre-condition of an empathic experience. The Feshbach model includes cognitive discrimination of emotional states, perspective taking, and responding. Observing another in distress stimulates an emotional arousal but the arousal must be identified and discriminated into its emotional components. Thus the cognitive skill of isolating the emotional is a pre-requisite to empathy. Two additional skills are needed to complete the empathic experience. Perspective taking or assuming the role of another is necessary. This entails the ability to “view the situation determining the emotion in a similar way as the individual actually experiencing the event” (Feshbach & Feshbach, 1982, p . 404). The last component of the

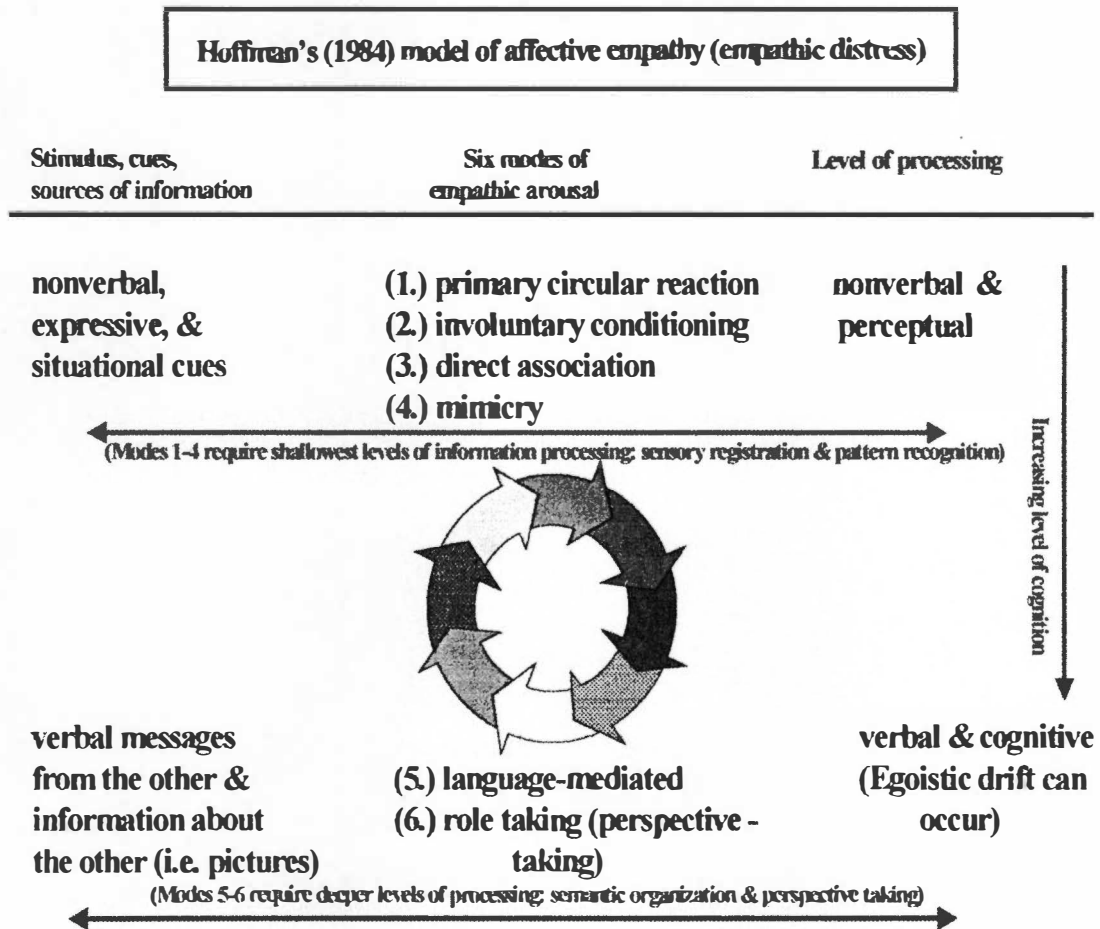


Figure 1. Hoffman's Model of Affective Empathy

Feshbach model includes responding affectively.

Some studies provide empirical evidence that empathy develops naturally through the adolescent years. In a study by Hatcher, et al (1994), findings were consistent with a 1991 Davis and Franzoi study: certain aspects of empathy develop **naturally** during adolescence even in the absence of empathy training. Adolescents' capacity for true empathy appears especially present in their increased ability to identify with fictional characters when training is provided. Hatcher, et al also found that college students appear optimally capable of learning the higher components of empathy: empathic concern and perspective taking. Interestingly, in this study gender did not affect teachability of empathy skills; both males and females were equally teachable even though females began with higher empathy scores. Studies show consistently that females score higher on all aspects of empathy (Adams, Jones, Schvaneveldt, & Jenson, 1982 & 1979; Barnett, Howard, King, & Dino, 1980; Eisenberg & Mussen, 1978; Eysenck & Eysenck, 1978; Kalliopuska, 1983a, 1983b; Mehrabian & Epstein, 1972; Mehrabian & O'Reilly, 1980; Hoffman, 1977; Davis, 1980 & 1991). The higher empathic tendency of females is also related to the greater arousability of females than males (Mehrabian, 1977a, 1977b).

Davis (1983) in a study of 205 adolescents over 3 years found that

without training, empathy increased on subscales of perspective taking and empathic concern and decreased for personal distress. Results are consistent with Hoffman's developmental model ("increasing capacity for role-taking gradually transforms the personal, 'selfish' distress reactions into a more other-oriented reaction of sympathy and compassion", Davis, 1983, p. 83). Findings indicated **gender differences** with females measuring higher on the 4 subscales of his empathy measurement instrument, the Interpersonal Reactivity Index.

Models of Empathic Responding

Complex theories of empathy (Hoffman, Miller & Eisenberg) indicate that although empathic arousal can lead to prosocial behavior, it does not always. Eisenberg defines prosocial behavior as:

voluntary behavior intended to benefit another (regardless of motive). Although altruistic prosocial behaviors are perceived as being moral, prosocial acts can be motivated by nonmoral (e.g., the desire for social approval) or even immoral (e.g., the desire to manipulate another for one's own benefit) motives (Eisenberg, 1986, p. 2).

If the arousal remains in the personal distress phase, the person may not respond to others at all, focusing on self instead until the distress dissipates or perhaps responding in a seemingly altruistic fashion for the purpose of personal relief or because of internalized moral beliefs (Eisenberg & Miller , 1987 a). "The

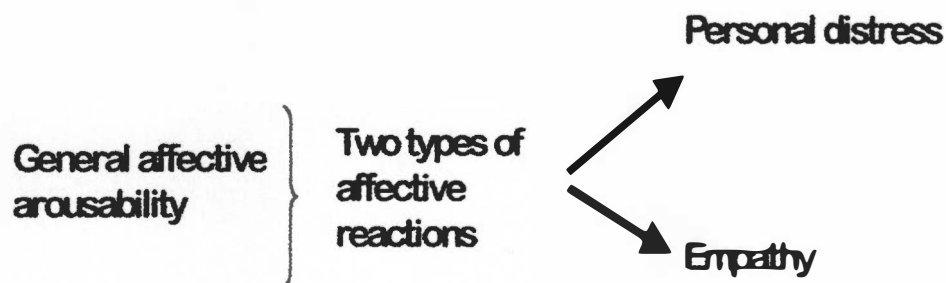
relationship between empathy and prosocial behavior is neither direct nor inevitable” (Miller and Eisenberg, Chap. 13). Early models like Batson & Coke seem simplistic compared to the more recent and more sophisticated models. A visual representation of the three models is presented next: Batson & Coke (1981) and Feshbachs in Figure 2, and Miller & Eisenberg (1987a) in Figure 3.

Empathy, sympathy, and personal distress can all serve as motivation for prosocial behavior; it is often difficult to determine which is the precursor (Eisenberg & Miller, 1987). According to Hoffman,

‘contagious’ personal distress is an early precursor of the development of empathy (1984). Feelings of ‘global distress’ or ‘empathic distress’ (Hoffman,1976) whereby young children confuse their own and others’ feelings and act as if they themselves are experiencing another’s distress is an early state in the development of empathy” (Eisenberg and Strayer, 1987, Chap. 1, p . 7).

Children may have difficulty in understanding their own vicarious arousal. Since adults are better able to interpret their own reactions, studies indicate adults and older children show higher associations between empathic arousal and altruism. (Eisenberg & Miller, 1987, p. 114).

Batson & Coke, 1981:



Feshbachs:



Figure 2. Two Models of Empathic Responding: Batson & Coke, Feshbachs

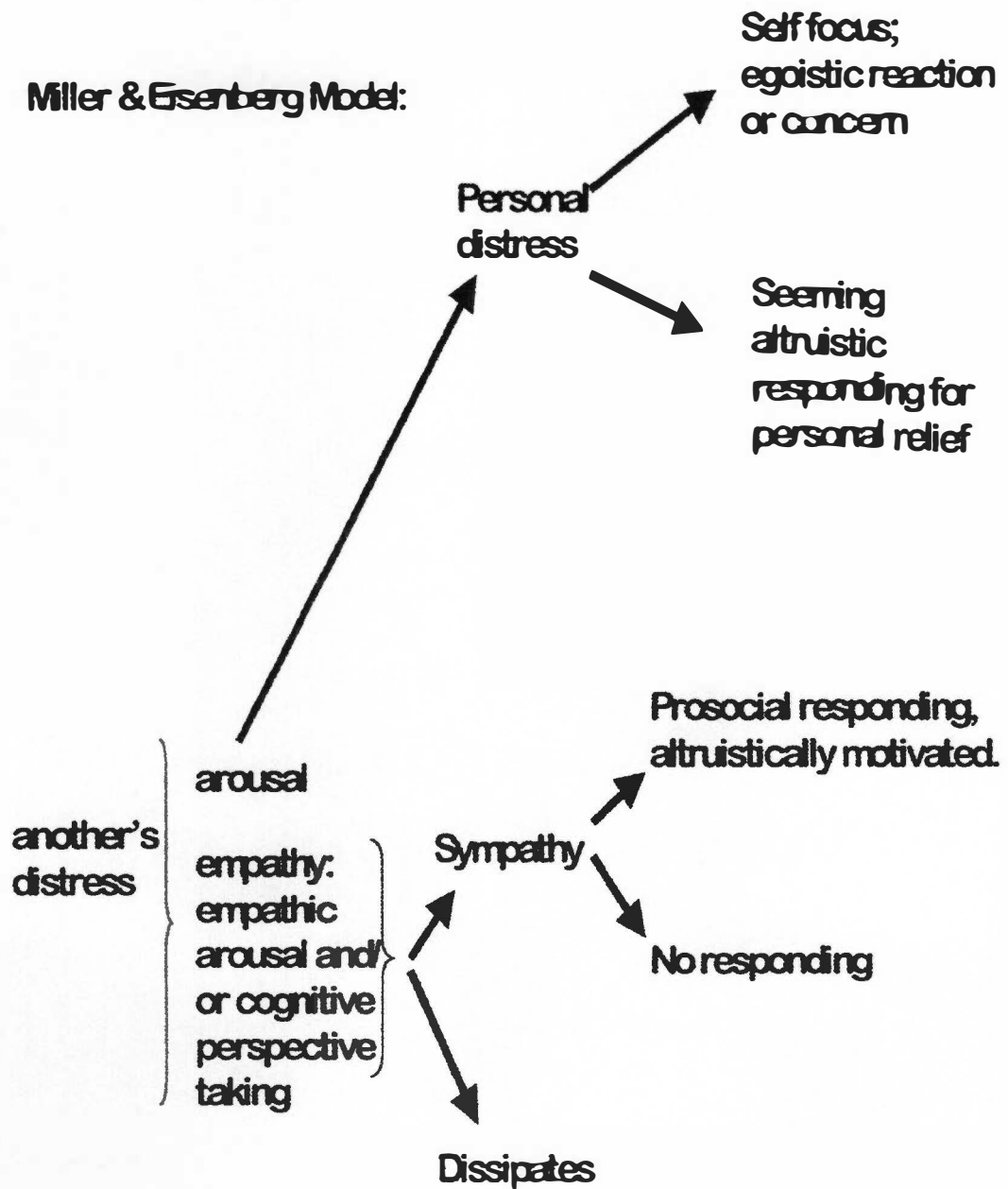


Figure 3. Model of Empathic Responding: Miller & Eisenberg

Why Is Empathy Important?

Social Consequences: The Prosocial Link

Empathy is an important social variable. Studies have shown that empathic processes are moderators of socially desired behavior (Zahn-Waxler & Radke-Yarrow, 1990) and characteristics such as moral reasoning, moral judgment, altruism, guilt, and higher levels of ego development (Bowman and Reeves, 1987). Empathy is correlated with such concepts as altruism, helping behavior, positive social behavior, morality, prosocial dispositions, prosocial behavior, healthy parenting styles (Feshbach 1987, p. 271), development of altruistic motives, prosocial motivation, and moral judgment.

There is also evidence that seemingly prosocial behavior can be mediated by self-oriented considerations (see Eisenberg and Miller 's model on page 25). Responses to others' distress can take several courses, including no response or simply egoistic distress; therefore, in any given instance of altruistic behavior, one cannot reliably conclude that it was empathically motivated (Eisenberg and Miller, 1987a, pp. 294-295). However, theories and empirical research have consistently supported a link between empathy and prosocial development (Eisenberg, 1986; Feshbach, 1982a; Batson & Coke, 1981; Hoffman, 1981; Eisenberg & Fabes, 1990).

Empathy development and its role in childhood behavior and aggression have been studied extensively (Feshbach, 1975; 1978; 1982; Radke-Yarrow & Zahn-Waxler, 1984; Eisenberg, Cameron, & Tryon, 1984; Eisenberg & Miller, 1987). Empathy has been shown to mediate prosocial behavior and decrease aggressive behavior for 6 and 7 year old boys (Feshbach & Feshbach, 1969: Feshbach & Feshbach, 1982). Aggressive adolescents tend to have trouble understanding and identifying with the feeling states of others, and the effect of empathy on aggressive and prosocial behavior in adolescents compared to children (Eisenberg & Miller, 1987) has received little attention with the exception of a few studies (Mehrabian & Epstein, 1972; Ellis, 1982; Goldstein, 1978; Guerre, 1990; Pecukonis, 1990).

In one study of adolescents and empathy, Ellis (1982) found that nonaggressive delinquents scored higher on empathy than aggressive delinquents. Mehrabian and Epstein (1972) found with college age students that high empathy students behaved less aggressively (administered less shock) than low empathy students. Empathy training programs for aggressive adolescents are gaining attention as cognitive/behavioral interventions have proven effective in outcome studies (Pecukonis, 1990).

The inverse relationship between empathy and aggression (Feshbach,

1982; Miller & Eisenberg, 1988) provides a particularly poignant question for study with antisocial behavior even though empathy does not **always** result in prosocial behavior. Instead the emotional arousal can lead to personal-distress and self-focus or may dissipate altogether (Eisenberg & Miller, 1987 a). However, low empathy has been associated with patterns of chronic offenders in several areas of interpersonal violence, including: rape, spouse assault, and physical and sexual child abuse (Wienir, 1985). Additionally, sex offenders programs have instituted empathy training with some success (Pithers, 1994).

In summary, the reasons for viewing empathy as a variable with important social consequences have changed over the past several decades. In the 60's and 70's many empirical studies of cognitive empathy appeared which studied the therapeutic process and empathic communication (Uhlemann, et al, 1976; Gladstein, 1983); most agreed that empathy is a necessary ingredient in psychotherapy but not sufficient for the needed change. Then researchers began studying the **affective** side of empathy, the vicarious sharing of emotion (Mehrabian, Young, and Sato, 1988). Since 1975 studies on empathy have continued but shifted from an emphasis on empathy as a therapeutic, cognitive skill in counseling to a broader use in prosocial behavior training programs (Eisenberg & Miller, 1987) with an increased interest in the affective domain.

Research Findings

There appears to be a lack of empathy training which emphasizes the affective component. Miller & Eisenberg (1988) reviewed the effectiveness of numerous empathy training programs for aggressive children and found inconsistent results. They suggest that these programs have generally focused on cognitive role taking and problem solving approaches which were an outgrowth of the cognitive orientation to empathy; the programs lacked the **affective** component of empathy building. Corcoran (1982a) concluded in his study of empathic tendency and self-other differentiation, that affective empathy is the opposite of the Rogerian perspective taking definition of empathy; affective empathy reduces self-other differentiation while cognitive (perspective-taking) requires it. Some theorists and researchers have concluded that it is this affective empathic ability which most moderates prosocial behavior (Batson & Coke, 1981; Eisenberg & Miller, 1987; Hoffman, 1984; Miller & Eisenberg, 1988). Interestingly, Dollinger and Riger (1984) found that when subjects were instructed to perspective-take versus remain detached, a measure of emotional empathy (the EETS) failed to detect any difference (Mehrabian, Young, and Sato, 1988). Studies of **affective** empathy are difficult to isolate because rarely have studies operationalized empathy in the same way; this has

led to confusion in the past and limited construct convergence (Chlopan, et al, 1985).

In an exhaustive survey of studies which used a specific measure of affective empathy, the **Emotional Empathic Tendency Scale (EETS)**, Mehrabian, Young, and Sato (1988) found several consistent findings. In studies using physiological correlates with empathy, high empathy subjects responded differentially higher to both crying and smiling infants than low empathy subjects (Mehrabian, et al, p. 222). Subjects higher on facial expressiveness also tended to score higher on empathic tendency; thus empathic people tend to be more visibly expressive (Mehrabian, et al, p.223). Since the EETS correlates highly with arousability and openness to emotional experience, it was not surprising that higher EETS scores predicted higher scores of weeping (crying) in response to 16 different life experiences (Mehrabian, et al, p.224).

Reviewing the studies of child-rearing practices using the EETS, Mehrabian, et al (1988) concluded that high empathy children received more time, affection, verbally explicit feelings, and emotional support from their parents than children with low empathy. Also, empathic mothering correlated with increased tolerance of infant crying and less child abuse (Mehrabian et al, 1988, p. 226). In two studies of affiliative tendency and nurturance (Mehrabian

& O'Reilly, 1980; Mehrabian, 1976), it was found that high empathy subjects were more affiliative, more interpersonally oriented, more nurturing, and more dependent on interpersonal relationships (Mehrabian, et al, 1988, p. 229). Kohut contends that **parental empathic failure** can lead to problems with self concept and other psychopathology in the child (Feshbach, 1982, p. 319) (bold added).

In 1978 Feshbach reviewed the research on the relation of empathy to prosocial behavior which had used her picture-story approach; the five studies she found supported the inverse relationship between empathy and aggression after the preschool years (Eisenberg & Miller, 1987). In her review in 1983, Eisenberg found a positive relation between empathy and prosocial behavior for adults and children when prosocial behavior was defined as assisting an individual (Eisenberg & Miller, 1987).

The type of measure used has been found to be important. Reviewing research on empathy and altruism in 1982, Underwood and Moore conducted a meta-analysis of 11 studies of children using picture/story indicators of empathy. Their conclusion was that the type of measure influences the findings, i.e. nonverbal measures tend to produce stronger associations between empathy and altruism than picture/story or questionnaire measures. In a qualitative and

quantitative *meta-analysis* in 1987, Eisenberg & Miller found overall that the positive association between empathy and prosocial behavior varied mostly according to the type of measure used. Picture\story measures were not significant, but physiological indices, self-report, misattribution, and other indices showed varying positive associations from about .10 to .36 (Eisenberg & Miller, 1987, p. 113).

In summary, empathy is highly correlated with social development. The most recent research studies of empathy indicate the complexity of these empathic processes as they relate to social development (Moore, 1990). Empathy functions as an inhibitor of antisocial behavior by promoting social bonding through communicating affect and triggering prosocial behaviors (Feshbach, 1978; Feshbach & Feshbach, 1982; Hoffman, 1984). Additionally, empathy has been shown to have an inverse relationship with aggression (Feshbach, 1982, p.317, Miller & Eisenberg, 1988) and plays an overall organizing role in social development. There is empirical evidence that the link between empathy, particularly affective empathy, and social development is strong.

Traditional Empathy Training

Carl Rogers

Carl Rogers is often credited with originating empathy training. In the 1950's with his client-centered therapy he emphasized and popularized the concept of empathy and placed it in a researchable, personality-related perspective. The focus of client-centered therapy is on the recognition and understanding of the client/patient's feelings in a **non-judgmental** way. Advice giving, persuading, directing, and interpreting are avoided by the therapist. To the Rogerians empathy is the ability "to sense the client's world as if it were your own, but without ever losing the 'as-if' quality" (Natale, 1972).

Rogers' empirical approach led to research on the process of clinical empathy and the measurement of empathy with the emphasis on role-taking or perspective-taking which assumed a clearly cognitive, non-emotional approach to empathy. Client-centered theorists (Truax, Carkhuff, Greenson, Dittman) believed and taught that empathy was a necessary characteristic for therapeutic change in counseling (Natale, 1972, p. 36).

Research of Rogerian techniques initially were as Rogers predicted and positive, leaving Rogerian disciples exhilarated. Results suggested that psychotherapy research had reached a major break-through (Goldstein &

Michaels, 1985, p. 133). However, as a new generation of psychotherapy researchers scrutinized the early empathy-outcome studies, serious conceptual and methodological flaws were found. These results led researchers to question whether “empathy” was being studied at all, or whether such variables as therapist involvement, commitment, focus upon affect, or verbal skill were instead being judged (Goldstein & Michaels, 1985, p. 134); the issues of construct definition and measurement surfaced. Many studies in the 1970's supported a general conclusion that a “broad array of both therapist characteristics and qualities of the patient influence or covary with therapist empathy” (Goldstein & Michaels, 1985, p. 140) so that a myriad of variables affect outcome in psychotherapy.

Didactic-Experiential Rogerian Approach to the Helping Process

Some Rogerian disciples continued to develop training based on didactic-experiential Rogerian approaches. In the 1960's Truax, Carkhuff and their associates used such an approach to develop training specifically intended to increase levels of helper empathy. The procedures of their approach are summarized as follows: (1.) Readings in psychotherapy theory and practice, (2.) Listening to audio tapes of psychotherapy sessions, (3.) Rating excerpts from the taped sessions of experienced therapists, (4.) Reflecting the feelings of

taped patient statements at a Level 3 empathy on the Accurate Empathy Scale, (5.) Live role playing, (6.) Feedback from supervisors of the taped live role plays, (7.) Actual therapeutic interviews by the trainees, (8.) Feedback in group supervision of the taped therapeutic interviews, (9.) Quasi group psychotherapy in tandem with the above procedures (Goldstein & Michaels, 1985, p. 197). Later Carkhuff developed a components approach to teaching empathy with separate training for both the discrimination and communication of empathy.

The Interpersonal Living Laboratory

Another empathy training model was developed by Gerald Egan in 1976. In his interpersonal living laboratory, he brought together components of what was then called encounter, sensitivity, or T - group experiences with a social learning approach. The purpose was to teach a spectrum of discrete interpersonal skills in the context of a group experience of safety and feedback (Goldstein & Michaels, 1985, p . 202). Developing specific interpersonal learning goals, members contracted to achieve these goals by developing relationships with other laboratory group members. The core interpersonal skills consisted of the following: self-presentation skills, response skills, challenge skills, and group-specific skills. Two levels of empathic responding were taught; however, very little outcome research was done (Goldstein & Michaels,

p. 213).

Personal Development Movement

Empathy training was mixed in with other psychological trends. With its roots in education and psychology, in the 1970's a movement of personal development evolved. Various names have been used to describe this movement including social skills training, interpersonal skills training, psychological education, etc. Three programs devoted attention to empathy training: (1.) Relationship Enhancement, (2.) Microtraining: Enriching Intimacy Program, and (3.) Structured Learning. After reviewing these programs and related others, Goldstein and Michaels conclude that most typically they have been empathy communication training (p. 225) and lack what they term "a components approach." Thus, they proposed a six-stage training program which included: (1.) Readiness Training, (2.) Perceptual Accuracy Training, (3.) Affective Reverberation Training, (4.) Cognitive Analysis Training, (5.) Empathic Communication Training, and (6.) Transfer and Maintenance Training (Goldstein & Michaels, pp. 225-235). The length of a program like their proposal requires a commitment of many weeks and few people in the general population will pay for the training and commit the time.

Limitations of Training Models

The limitations of training models include their assumptions. Most empathy training for adults is based on counselor education models, requiring study, college level aptitude, and a course-like time frame requiring a commitment of several hundred dollars. Although borrowing components of empathy training from counseling or psychotherapy research for use with the general population may appear useful, this researcher has found limited evidence that any formal, short-term model has been developed

The traditional empathy training models appear to be based on cognitive approaches. More recent research and theory have supported an affective approach to empathy, i.e. the prosocial link. Even the well known communication training such as empathic connection (Neil Jacobson, Harville Hendrix) are based primarily on reflective listening exercises and lack an affective component. This approach is commonly used in marital therapy. "Empathy training today" remains the techniques or training programs developed and designed to enhance empathy of the psychotherapist or counselor, or occasionally people not in helper roles such as couples, parents, teachers, children, or adolescents (Goldstein & Michaels, 1985, p. 196). Empathy training for the future remains a question.

Theoretical Basis of the Nugent Empathy Training Model

Theoretically, both affective and cognitive processes play a role in empathic responding, dependent upon the developmental stage and personality of the person. Both affective and cognitive processes were used to build the Nugent Empathy Training Model. Attention was given to three of the key cognitive processes. These three processes are: (1.) a basic cognitive skill necessary for mature empathy, the ability to differentiate between feelings of self and feelings of others; (2.) the ability to symbolically associate cues regarding another's distress and one's own past distress; and (3.) the interpretation of symbols.

Role-taking is another cognitive skill that is often used in empathic responding and was, therefore, incorporated into the Nugent model based upon the theoretical model of Feshbach. According to Feshbach (1978), role-taking is one of the two necessary cognitive processes: (1) discriminating and labeling affective states of others, (2) assuming the perspective and role of another. Role-taking capacities increase with age as experiential information is stored and available for interpreting cues from others. The ability to interpret symbols is a relatively sophisticated level of cognition (Eisenberg & Strayer, 1987, Chap. 1, p. 9).

Affective processes are also used in the Nugent Empathy Training Model based upon theories of affective responding. While Hoffman believes that primitive empathic responding is like the personal distress state, others believe that these descriptions are precursors to empathy. Basically, it depends on the definition of empathy being used. Davis (1983a, p. 183), however, states that “it has been the rule, rather than the exception, that actual feelings of empathic concern and personal distress co-occur to a great degree.” Interestingly, Hoffman contends that the triggering of the empathizer’s memories of similar past experiences associated with another’s emotional state is an empathic response (Eisenberg & Strayer, 1987, Chap. 1, p. 8) and may also be self-reinforcing. That is, every time we empathize with someone in distress the resulting **co-occurrence** of our own distress and distress cues from another person may increase the strength of the connection between the cues of another’s distress and our own empathic response (Hoffman, 1984, p. 107) (bold added). Therefore, we are likely to increase our empathic distress (affective empathy) response in the future. This concept is a crucial theoretical underpinning of the affective component of the Nugent model.

Building upon these theoretical rationale, the Nugent empathy training model specifically attempts to increase perspective taking and empathic concern,

but does not attempt to increase fantasy skills or personal distress. Although some high school students have been shown to increase their fantasy scale scores with empathy training (Hatcher, et al, 1994), developmentally college students are less likely to increase this area. Although the model addresses the development of both cognitive and affective empathy, affective empathy is emphasized since in combination with cognitive empathy, it has been shown most highly correlated to a change in positive behavior toward others (Staub, 1987, p. 106; Eisenberg, 1986, p p. 31-32). Activities in the Nugent Empathy Training were developed on the basis of previous theory and research. (See methodology section for activities in the model.)

Hypotheses

- Hypothesis 1: At pretest, there will be a difference on EC and PT subscales of the IRI by gender. Females will score higher than males.
- Hypothesis 2: There will be an EC and PT posttest difference between the experimental and comparison groups when controlling for prescores and gender.

Research Question

Can males and females gain equally in empathy skills regardless of whether they are in the treatment or comparison group?

Follow up data were collected purely for academic inquiry. No hypotheses were made. Demographic data on age and college major were included for additional inquiry.

CHAPTER III.

METHODOLOGY

Chapter III describes the methods and procedures used in this study. Included in this chapter are the setting, sample size, recruitment of participants, demographic data of participants, instrumentation, design of the study, definition of terms, integrity of treatment conditions, and procedures.

Setting

The data collection for this research took place in Henson Hall (College of Social Work) on the UTK campus on Saturday, September 27, 1997.

Sample

Sample Size and Statistical Power

In order to determine the sample size needed, a statistical power analysis was conducted. Sufficient power was needed to test the hypothesis of a difference in posttest dependent variable scores (for two of the subscales, EC (Empathic Concern) and PT (Perspective Taking) between the empathy training and comparison groups, using multiple regression and controlling for the pretest subscales of EC, PT, PD (Personal Distress), & FS (Fantasy), for gender, and testing for an interaction variable. The equation is illustrated in Figure 4.

$$DV = B_0 + \text{(SET)} [PT_1 + PD_1 + FS_1 + EC_1 + GENDER] + GROUP + GENDER \times GROUP$$

Figure 4. Equation Used for Computing Statistical Power

A total of 5 covariates was entered as a set in the 1st step and the main effect variable (treatment group vs. comparison) was entered in the 2nd step. Training data were used in the power analysis; specifically, the squared semi-partial correlations of post scores and group while controlling for pretest subscale scores and gender were computed and used in the power analysis. All **four subscale prescores** were controlled for because Davis (1980) indicates that even though each subscale loads on a different factor, they are also correlated with each other; together they comprise the construct called empathy.

To compute the power analysis, the five covariates (EC, PT, FS, PD, and gender) were entered as a set, then group as the primary variable, and then the interaction term as the one subsequent variable. The R^2 value for the covariates in the training data was entered in step 1 under Incremental Variance. The sr^2 for group was entered in step 2 under Incremental Variance. Since the two subscales Empathic Concern and Perspective Taking

are hypothesized to increase with empathy training, training data were used for these two scales alone.

From training data for the EC subscale, the SR^2 for the set of covariates was .368, rounded to .4. An additional sr^2 of .1259, rounded to .13, was entered for the main effect group variable and .07 for the interaction variable. Entering these correlations incrementally into the power analysis with alpha set at .05 and an N of 50, the statistical power was .80. This is considered acceptable; that is, there is an 80% probability of correctly rejecting a false null hypothesis.

From training data for the PT subscale, the SR^2 for the set of covariates was .48726, rounded to .49. An additional sr^2 of .20245, rounded to .2, for group was entered next, and then .07 was added for the interaction variable. Entering these incrementally into the power analysis with an N of 40, the power was $> .85$. In summary, a statistical power of .85 with alpha set at .05 indicated an N of 40 was needed. Therefore, to test Hypothesis 2, a sample size of 40 - 50 was assumed satisfactory. Based on this analysis, a sample size of about 60 was sought for this research.

Recruitment of Participants

The empathy training program as it was developed appeared to fit best young, fairly well educated adults. Theoretically, their empathic developmental level made this age group particularly amenable to the current training model. Specifically, the current model includes fictitious characters in a college setting (the movie *Higher Learning*). The model also requires that the participants have the ability to name their own feelings and cognitively take the role of others, both fictitious characters (college students) and people in their personal lives. College students fit these general parameters and were conveniently available for this researcher at the University of TN, Knoxville; therefore, college students were recruited, providing a convenience sample for the study. As the model is developed further in the future, samples from other appropriate populations can be obtained.

Professors in the departments of Psychology and Social Work were asked for their permission to have students recruited from their classes. After talking to faculty in the departments of Nursing and Educational Psychology, it was decided not to pursue recruiting their students; there was less cooperation and interest from these departments and more bureaucratic

requirements. If an inadequate number of students had signed up, the back up plan was to recruit college students through the campus newspaper to provide for more variety of background of students and to increase the sample size.

University of Tennessee students who were 18 or older were asked to volunteer for the research. Students in two Abnormal Psychology classes and one Child Psychology class were recruited from the Psychology Dept. Social Work students were recruited from the following classes: 416 Social Welfare Policy and Issues, 501 Foundations of Social Work Practice I, 516 Social Welfare Policy and Services, 521 Clinical Social Work Practice with Individuals, 543 Fiscal Management/Resource Development, and 526 Research Assessment in Social Work.

During recruitment, students were told that they could potentially increase their empathic ability by attending the empathy training. They were also told that they would be randomly assigned into one of two groups as part of the research, testing two methods of teaching empathy. They were also assured a free lunch as incentive to participate (and to hopefully decrease the possibility of a drop out problem in the afternoon).

During the first two weeks of September, a total of 180 students

signed up in these classes indicating that they were interested in participating in the empathy training research on Sept. 27. On September 27, 31 students showed up for the training. One left, complaining that the seating arrangements were unsatisfactory. A total of 30 students completed the pretest, participated in the training groups, and completed the posttest.

Each student signed an Informed Consent form (see Appendix A) before any participation. They were assured that all data would be reported in aggregate form, thereby protecting their confidentiality. They also filled out an Information Sheet (see Appendix B); they were asked for their address and a contact person (in the event they have moved) so that the follow-up post test could be mailed one month later. Phone numbers were also obtained, so that in the case of no response to the mailed instrument, they could complete the follow -up over the telephone.

Instrumentation - Paper and pencil measure of empathy.

In order to measure individual differences in empathy, a questionnaire called the **Interpersonal Reactivity Index** (hereafter referred to simply as the **IRI**,) was developed by Davis in 1980 and was used to measure multidimensions of empathy before and after treatment. was implemented (see Appendix C). He conceptualized that rather than being a unidimensional

construct, empathy can best be understood as a set of constructs, all related to the other but also clearly discriminable from each other (Davis, 1983, p. 113). His ideas addressed general problems associated with previous measurement instruments for empathy which were discussed in Chapter 2.

The IRI measures empathy as a multidimensional construct, tapping into four separate aspects of empathy: (1) Perspective taking, (2) Fantasy, (3) Empathic Concern, and (4) Personal Distress. The content domain of each subscale fits the general definition of empathy as “a reaction to the observed experiences of others” (Davis, 1983, p. 114). The IRI is a 28 item self-report measure with four 7 item subscales, and it is scored on a 5 point Likert scale with “0” meaning “does not describe me well” and with a “4” meaning “describes me very well.”

The four subscales are labeled as follows: **PD** for Personal Distress, **EC** for Empathic Concern, **PT** for Perspective Taking, and **FS** for Fantasy. The two subscales **Personal Distress** and **Empathic Concern** both measure emotional reactions; **PD** measures egoistic feelings, and **EC** measures other-oriented feelings of concern and sympathy. As discussed earlier, empathy responses may emanate from both of these emotional reactions but for different reasons. The **Perspective Taking** subscale measures the ability to

cognitively or psychologically take the perspective of others; this is also called role-taking by some theorists. The last subscale, **Fantasy**, measures the ability to imaginatively experience the feelings and actions of fictitious characters such as in books, movies, or plays.

More specifically, the **Personal Distress** scale assesses feelings of personal unease, distress, and discomfort in response to the emotions of others. An example of a **PD** item is “Being in a tense emotional situation scares me.” The **Empathic Concern** scale assesses feelings of “warmth, compassion, and concern for other people” (Davis, 1983, p. 117). An illustrative **EC** scale item is “I often have tender, concerned feelings for people less fortunate than me.” The **Perspective Taking** scale assesses the capacity to take the point of view of others. An illustrative item is “I sometimes try to understand my friends better by imagining how things look from their perspective.” The **Fantasy Scale** assesses the tendency to experience the feelings and actions of characters in books, movies, and plays. An illustrative item is “I really get involved with the feelings of the characters in a novel.”

Psychometric Properties of the IRI

The IRI has been shown in previous research to exhibit acceptable levels of internal reliability, test-retest reliability, and construct validity. A brief review of the published research on the IRI follows.

Reliability of the IRI

In developing the IRI, Davis (1980) began with a pool of over 50 items. Although some items were taken from other empathy scales, the majority were developed for the new instrument. Jöreskog factor analyses were conducted (using oblique rotation, $\delta = 0$) on data from a sample of 452 students (201 males and 251 females), and four major factors emerged. Next, a 45 item version of the questionnaire with four sets of items duplicating closely the four psychological domains found in the first factor analysis was tested. Four hundred twenty-seven students (221 males and 206 females) from introductory psychology classes responded to this form of the questionnaire. Again, factor analyses discriminated four clear factors which were nearly identical in both sexes.

In order to further increase the reliability of the instrument, another test was made; only items which loaded heavily in both sexes and on the respective factors were used. This resulted in four discrete seven-item, unit-

weighted subscales. A final analysis was conducted on the instrument, again using data from 1161 introductory psychology students (579 males and 582 females) who had not participated in either of the first two studies. For both males and females, nearly identical factors representing the four subscales were clearly delineated. Table 1 provides results from the analysis of the final version of the scale (Davis, 1980).

Davis used another sample (56 males and 53 females) to evaluate the test-retest reliability of the subscales. The time between the first and second administrations of the IRI ranged between 60 and 75 days. Results for both males and females suggested stability over time on the IRI. Table 2 provides the stability coefficients:

In summary, the four subscales exhibit satisfactory internal consistency (Cronbach's standardized alpha) and test-retest reliability.

Validity of the IRI

Davis tested the proposition that empathy is a set of related constructs and that the IRI subscales are valid measures of those aspects of empathy. He examined the following three hypotheses to test for convergent and discriminant validity:

- (1) Each of the four subscales measures some aspect of reactivity to

Table 1**Factor Pattern Loadings of Final Empathy Questionnaire (28 items)**

Item	<u>Fantasy</u>		<u>Perspective-Taking</u>		<u>Empathic Concern</u>		<u>Personal Distress</u>	
	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>
1	-.34	-.29	-.11	.08	-.17	.02	-.07	.07
2	-.03	-.03	.09	.11	-.66	-.54	.05	-.04
3	-.04	-.05	-.56	-.54	.04	.04	.07	.05
4	-.09	-.19	-.07	-.15	.34	.45	-.04	-.11
5	-.60	-.52	.05	.06	.01	-.04	-.05	-.04
6	-.01	-.03	-.05	.06	-.05	.00	.52	.69
7	.35	.34	.13	.16	.09	.21	-.03	.03
8	-.04	-.04	.58	.69	.03	.09	-.07	-.05
9	-.07	-.14	.16	.17	-.41	-.30	-.18	-.02
10	-.04	-.12	-.14	-.03	-.27	-.04	.26	.31
11	-.06	-.14	.47	.53	-.14	-.11	.02	-.01
12	.45	.39	-.01	.11	-.04	.24	.01	.13
13	.07	.03	.01	.11	.19	.25	-.35	-.38
14	-.02	-.02	-.01	-.02	.60	.64	-.02	.01
15	-.01	-.07	-.45	-.39	-.04	-.07	-.03	.05
16	-.74	-.76	-.01	-.01	.02	.12	.05	.07
17	-.08	.01	-.05	.01	-.08	-.01	.47	.50
18	.02	.00	-.05	.01	.39	.49	.09	.02
19	-.08	-.10	-.02	.06	-.06	-.05	-.70	-.72
20	-.15	-.24	-.04	.02	-.52	-.36	-.08	-.06
21	-.04	-.10	.65	.74	-.01	.01	-.05	.06
22	-.08	-.11	.12	-.05	-.53	-.48	.19	.03
23	-.76	-.80	.12	-.01	.08	.03	.08	.00
24	.01	.01	.05	-.04	.13	.04	.88	.79
25	-.02	-.04	.51	.50	-.05	.02	.04	-.06
26	-.74	-.61	.17	.15	.06	-.01	.06	.02
27	-.02	.03	.02	-.07	.17	.06	.77	.64
28	-.02	-.02	.48	.47	-.16	-.16	.03	-.10
Standardized alpha coefficients for the 7 -item, unit weighted scales:								
	.78	.75	.75	.78	.72	.70	.78	.78

Davis, M (1980). A multidimensional approach to individual differences in empathy. Catalog of Selected Documents In Psychology, 10 (4), p. 11

Table 2**Test-Retest Reliability Coefficients for the Four Empathy Subscales**

	<u>Fantasy Scale</u>	<u>Perspective-taking Scale</u>	<u>Empathic Concern Scale</u>	<u>Personal Distress Scale</u>
Males	.79	.61	.72	.68
Females	.81	.62	.70	.76

Davis, M (1980). A multidimensional approach to individual differences in empathy. Catalog of Selected Documents in Psychology, 10 (4), p. 12.

others; therefore the different subscales should relate differentially to other psychological constructs.

- (2) Since each subscale presumably measures some aspect of empathy, intercorrelations among the IRI subscales should follow a predicted pattern.
- (3) Subscales should relate differentially with existing unidimensional empathy measures.

The following section provides test information on validity of the scales taken from Davis' 1983 article. For his first hypothesis, five psychological constructs were used for comparison with the four IRI subscales. The five constructs were: social competence/interpersonal functioning, self esteem, emotionality, sensitivity to others, and intelligence.

Intelligence was included for general information only and is excluded in subsequent discussion. For logical or theoretical reasons, each of the other four constructs was expected to be related to one or more of the IRI subscales. In order to measure interpersonal functioning, the following eight instruments were used:

- (1) The 8 item negative characteristic Masculinity (M^-) scale of the EPAQ (Extended Personal Attributes Questionnaire; Spence, Helmreich, & Holohan, 1979) consisting of eight items of social undesirability such as dictatorial and arrogant.
- (2) The 4 item negative characteristic Femininity (F_{va}^-) scale of the EPAQ measuring verbal passive-aggressive characteristics such as complaining and whining.
- (3) The 4 item negative characteristic Femininity (F_c^-) scale of the EPAQ measuring more communal and less aggressive qualities like gullibility.
- (4) A self report measure of shyness developed by Cheek & Buss (1981).
- (5) A self report measure of audience anxiety developed by Buss (1980).

- (6) A self report measure of loneliness developed by Russell, Peplau, & Cutrona (1980).
- (7) The Social Anxiety subscale of the Self-Consciousness Scale developed by Fenigstein et al., (1975).
- (8) A six item measure of extraversion taken from the Self-Monitoring Scale (Snyder, 1974).

In order to measure self-esteem, the following two measures were used:

- (1) The 17 item Texas Social Behavior Inventory (TSBI) which measures self-esteem in social settings (Helmreich, Stapp, & Ervin, 1974).
- (2) The 7 item Briggs et al. Self-Esteem Scale developed at the University of Texas at Austin (Briggs, Cheek, and Buss, 1980).

In order to measure emotionality, the following two measures were used:

- (1) The 8 item Masculinity-Femininity (M-F) scale taken from the original PAQ (Personal Attributes Questionnaire, Spence et al., 1974) measuring a lack of emotional vulnerability with items like “feelings not easily hurt” (Davis, 1983, p. 117).
- (2) The 5 item Fearfulness scale measuring the tendency to be frightened [taken from the EASI (Emotionality, Activity,

Sociability, and Impulsivity temperament instrument), Buss & Plomin, (1975)].

In order to measure sensitivity to others, the following three measures were used:

- (1) The Public Self-Consciousness scale measuring a sensitivity based on self-concern for how one is perceived by others (Fenigstein, Scheier, and Buss, 1975).
- (2) The Other-directedness scale from Briggs' Self-Monitoring Scale (1980) measuring a sensitivity based on self-concern for how one is viewed by others.
- (3) The F scale of the PAQ (Personal Attributes Questionnaire) which measures a sensitivity for others' feelings without regard for how one is viewed.

Results of the correlational analysis between the four IRI subscales and the other psychological measures are indicated in Table 3.

The results in Table 3 support Davis's hypothesis that the IRI subscales will correlate differentially with other psychological measures. These correlations support the four subscales as measuring separate though related constructs with specific relations with other constructs.

Table 3
Relationships Between Interpersonal Reactivity Index Subscales and Psychological Measures

Measure	Perspective Taking		Fantasy		Empathic Concern		Personal Distress	
	Females	Males	Females	Males	Females	Males	Females	Males
Interpersonal functioning								
Shyness	-.20	-.13	.02	.21	.07	.15	.44	.49
Loneliness	-.13	-.23	.05	.22	-.19	-.11	.22	.24
Social Anxiety (SCI)	-.17	-.07	.02	.22	.12	.14	.39	.43
Audience anxiety	-.12	-.10	.08	.02	.13	.19	.34	.37
M ⁻ (EPAQ)	-.28	-.30	.03	-.02	-.35	-.30	.07	-.11
F _{va} ⁻ (EPAQ)	-.25	-.19	.13	.03	-.01	-.14	.27	.20
F _c ⁻ (EPAQ)	-.08	.05	.06	-.02	.09	.07	.25	.29
Extraversion (SM Scale)	.05	.12	.00	-.05	.07	-.09	-.30	-.30
Self-esteem								
TSBI	.26	.20	.03	.04	.17	.11	-.38	-.44
Briggs et al. Self-Esteem Scale	.20	.20	.03	.04	.17	.11	-.38	-.44
Emotionality								
M-F Scale (PAQ)	.07	-.02	-.21	-.22	-.23	-.19	-.41	-.54
Fearfulness (EASI)	-.21	-.22	.18	.15	.16	.10	.53	.59
Sensitivity to others								
Public self-consciousness (SCI)	-.07	-.17	.19	.25	.21	.14	.12	.18
Other-directedness (SM Scale)	-.15	-.30	.14	.20	-.07	.00	.19	.35
F scale (PAQ)	.33	.37	.15	.29	.55	.58	-.12	-.01
Intelligence								
SAT-Quantitative	.13	.01	.08	.03	-.10	-.07	-.09	.01
SAT-Verbal	.09	-.02	.12	.24	-.08	-.07	-.12	-.01
WAIS Vocabulary	.07	.15	.28	.11	-.22	-.10	-.19	-.08

NOTE: Sample size for the Weschler Adult Intelligence Scale (WAIS) Vocabulary are 60 males and 54 females. All other *ns* are at least 225 males and 204 females. Correlations of .10 or higher are significant beyond the .05 level for these variables. For the WAIS correlations, coefficients of .23 or greater are significant beyond the .05 level. SCI = Self-Consciousness Index; EPAQ = Extended Personal Attributes Questionnaire; M⁻ = negative masculinity; F_{va}⁻ = negative femininity verbal passive aggressive; F_c⁻ = negative femininity communal; SM = self monitoring; TSBI = Texas Social Behavior Inventory; PAQ = Personal Attributes Questionnaire; SAT = Scholastic Aptitude Test; WAIS = Weschler Adult Intelligence Scale.

Davis, M. (1983). Measuring Individual Differences in Empathy: Evidence for a Multidimensional Approach. *Journal of Personality and Social Psychology*, 44, 1, p.118.

Specifically, the PT subscale showed an association with better interpersonal functioning, higher self-esteem and lesser emotionality. Perspective Taking scores were negatively correlated to the social dysfunction measures and positively correlated with extraversion for 15 of the 16 values (8 for each gender). Thus, perspective taking was related to an interpersonal functioning level which lacked boasting, verbal aggression, and arrogance, which were indicated most strongly in two of the negative scales EPAQ:M⁻ and EPAQ:F_{VA}⁻. A modest but consistent pattern was indicated by the mean PT correlation scores of -.15 with all eight measures. Also, PT scores were positively and significantly related to self-esteem measures. The mean correlation was .23 over measures and gender.

The association between PT scores and emotionality was mixed. The Fearfulness scale (EASI) correlated negatively with the PT scores (mean r is -.215), indicating increased PT associated with less nervousness, anxiety, and insecurity. However, the PT score was unrelated to the M-F scale of the PAQ as expected (mean r was .02). The M-F scale measures emotional invulnerability and lack of reaction to emotional situations. Interestingly, PT scores correlated slightly negatively with a measure of self-oriented sensitivity measure (mean r = -.225 on the Other-directedness scale derived

from the Self-Monitoring Scale). It was positively correlated to the PAQ's F scale which indicates an other-oriented sensitivity. Apparently, it was a more selfless concern for others rather than a concern about how others perceive us that mediated the sensitivity of high perspective takers.

As predicted, FS scores were not associated with self-esteem or social functioning (mean $r = -.07$ for self-esteem and mean $r = .07$ for social functioning) although there was a modest negative correlation on the Briggs, et al. (1980) Self-Esteem Scale. Interestingly, there were modest correlations between FS scores and intelligence (as measured by academic achievement) and emotional reactivity. The mean correlation of $-.21$ with the M-F scale means increased fantasizing was associated with emotional vulnerability. High fantasizers may also be slightly more fearful, as indicated by a very small positive correlation of FS scores and Fearfulness scores (mean $r = .16$). There was also a small but consistent relationship between verbal intelligence and fantasizing (mean $r = .19$). Lastly, fantasizers tended to be more sensitive to others. High FS scores correlated positively with both kinds of sensitivity measures, i.e. self-oriented and other-oriented measures and was higher for males on all three scales.

Empathic Concern scores as predicted were associated with measures

of emotionality (mean $r = -.21$ on the M-F scale and mean $r = .16$ on the Fearfulness scale) and a nonselfish concern for other people (mean $r = .57$ on the F scale of the PAQ). Empathic Concern was weakly associated with self-esteem (mean $r = .05$). Interpersonal functioning was inconsistently related to EC scores (mean $r = -.01$). However, within this category some significant and contradictory relationships were found. Empathic Concern scores and measures of shyness, social anxiety, and audience anxiety were positively related while loneliness and undesirable personal style (boastfulness and egotism) were significantly and negatively related. Thus, high levels of EC were related to slight anxiety and shyness as well as less loneliness and less undesirable interpersonal style.

As expected, higher levels of PD scores were strongly associated with low scores on interpersonal functioning and self-esteem. High PD scorers tended to indicate more shyness, social anxiety, and less extraversion than those with low PD scores. Additionally, high PD scorers tended to score high on emotional vulnerability (M-F scale) and chronic fearfulness. Supporting Eisenberg's model of empathic responding, significant positive correlations between PD and self-oriented measures of sensitivity to others were found. "The mean correlation of .21 indicates a modest but consistent

tendency for high PD scores to be associated with a concern for the self as the object of others' evaluations.....PD was essentially unrelated to the F scale, indicating a lack of relationship between PD scores and a more other-oriented concern and sensitivity" (Davis, 1983, p. 121).

Particular patterns of correlations were predicted for the IRI subscales. It was hypothesized that PT scores would relate positively to EC scores and either negatively or independent of PD scores. Results are listed in Table 4.

As indicated in Table 4, two samples were used to test the intercorrelation of the subscales. As predicted, PT and EC were significantly

Table 4

Intercorrelations of the Interpersonal Reactivity Index Subscales for Males and Females in Two Samples

Male and Female in Two Samples												
Sample 1 ^a						Sample 2 ^b						
<u>Perspective Taking</u>		<u>Empathic Concern</u>		<u>Personal Distress</u>		<u>Perspective Taking</u>		<u>Empathic Concern</u>		<u>Personal Distress</u>		
M	F	M	F	M	F	M	F	M	F	M	F	
Fantasy	.10	.12	.30	.31	.16	.04	.13	.15	.36	.35	.14	-.08
Pers-Tak		.33	.30	-.16	-.29			.32	.38	-.21	-.32	
Emp Con			.11	.01						.22	-.03	

Note: Correlation coefficients of .10 or greater are significant beyond the .05 level. M = males, F = females.

^a Sample 1: spring 1979, *Ns* = 392 males and 378 females

^b Sample 2: fall 1980, *Ns* = 225 males and 235 females

Davis, M. (1983). Measuring Individual Differences in Empathy: Evidence for a Multidimensional Approach. *Journal of Personality and Social Psychology*, 44, 1, p.122.

related across samples and gender (mean $r = .33$). Also as predicted, PT and PD were negatively related (mean $r = -.25$). FS and EC displayed similar patterns with variables in Table 1 and were positively correlated in this analysis (mean $r = .33$).

It was hypothesized that the subscales would be differentially correlated with two other well known and widely used empathy measurements. The first empathy measure was the Mehrabian and Epstein Emotional Empathy Scale (1972), which conceptualizes empathy as the tendency to react emotionally. This measure taps a range of emotional reactions which makes it more of a measure of emotionality in general (Davis, 1983, p. 118). The Hogan Empathy Scale (1969) clearly treats empathy as a cognitive response. Hogan defined empathy as ‘the apprehension of another’s condition or state of mind **without actually experiencing** that person’s feelings’” (Davis, p.118) (bold added). Hogan’s scale used items from the MMPI (Minnesota Multiphasic Personality Inventory) and the CPI (California Psychological Inventory; see Hogan, 1969, for more details.) It was predicted that the **Perspective Taking** scale would correlate highest with measures of cognitive empathy, specifically the Hogan Empathy Scale. The remaining subscales were predicted to correlate

with the more emotional empathy measure, the Mehrabian and Epstein Emotional Empathy Scale. In establishing the convergent and discriminant validity of the IRI scales, Davis (1983) found the differential relation of the subscales to existing unidimensional measures of empathy to be consistent with expectations in the hypothesized direction. Correlation coefficients are provided in Table 5 below.

Table 5

Relationships Between the Interpersonal Reactivity Index Subscales and Two Empathy Scales

Subscale	Hogan Empathy Scale		Mehrabian & Epstein Emotional Empathy Scale	
	M	F	M	F
Perspective-Taking	.42	.37	.22	.17
Fantasy	.15	.15	.48	.56
Empathic Concern	.11	.25	.63	.56
Personal Distress	-.25	-.40	.36	.12

Note: N_s = 225 males and 235 females. All correlation coefficients are significant beyond the .05 level. M = males, F = females.

Davis, M. (1983). Measuring Individual Differences in Empathy: Evidence for a Multidimensional Approach., *Journal of Personality and Social Psychology*, 44, 1, p.122.

Results reported in Table 5 support the convergent and discriminant validity of the subscales of the IRI; distinctive and predictable patterns of relationships exist between the IRI and the two unidimensional empathy scales. Consistent with the hypotheses, the PT subscale (cognitive empathy) was highly correlated (mean $r = .40$) with the Hogan Scale (cognitive). The

FS and EC scales were less correlated (mean r s of .15 and .18, respectively), and as expected the PD scale was significantly negatively correlated (mean $r = -.33$).

Correlations with the Mehrabian & Epstein (emotionality) scale also were consistent with predictions. The PT scale was the least correlated (mean $r = .20$) while the measures of more emotional empathy, the FS and EC scales, showed stronger associations (mean r s of .52 and .60). The PD scale showed a weaker association than might have been expected with a mean r of only .24.

Design of the Study

A randomized pretest-posttest experimental design was used in this study as shown in Figure 5. Randomization was used to create comparable groups. Participants were assigned into two groups, one with the full treatment and one with an approach without all of the treatment components. The IRI was administered pre and post.

Random Assignment

A computer program was set up to do a paired block random assignment of subjects to groups and was used on the day of the training. This block randomization procedure was used to as much as possible assure

equal group size (Leonard Gibb, 1991, pp. 87-89). Students were ranked by their IRI prescore on Empathic Concern, paired according to gender and then block randomly assigned to groups in order to provide for increased group comparability (see figure 5).

Specifically, there should be equal size, same proportion of males and females, and similar variance within the groups. Under these conditions, many confounding variables may be controlled.

Definition of Variables

The variables in this study are listed in Figure 6.

Variable: Gender

Gender has been shown to be associated with empathy. Several studies have suggested that women are more empathic than men (Hoffman, 1977; Eisenberg & Mussen, 1978; Mehrabian & Epstein, 1972; Davis, 1983). Significant gender differences have been found with the IRI. Like other empathy measures, females tend to score higher on each IRI subscale than males. Davis found the largest difference was with the fantasy scale, with a mean score of 18.75 for women and 15.73 for men, $F(1,1176) = 96.28$; $p < .001$ (Davis, 1980, p. 12). Therefore, gender was used as a variable to test the research hypothesis that men can learn empathy skills equally well as

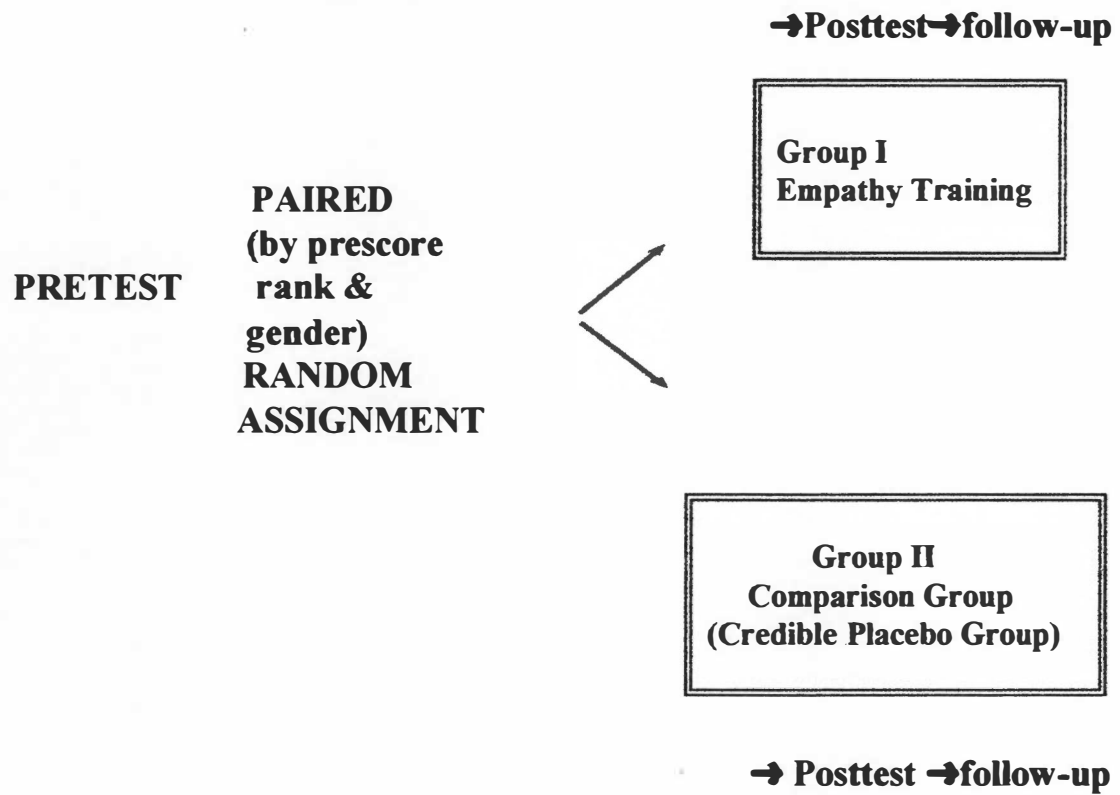


Figure 5. EXPERIMENTAL DESIGN

COVARIATES:	INDEPENDENT VARIABLES:	DEPENDENT VARIABLES:
Pretreatment Measures Subscales of IRI: Perspective Taking Fantasy Scale Empathic Concern Personal Distress Demographic Info: Gender Age College Major	Treatment Conditions Group [Empathy training vs. Comparison group]	Post-tx measures Subscales of IRI: Perspective Taking Fantasy Scale Empathic Concern Personal Distress

Figure 6. VARIABLES

women even though women are likely to start out with higher scores. Gender was coded 0 for males and 1 for females.

Variable: Group

Participation in the treatment group was coded 0, while participation in the comparison group was coded 1.

Variable: Empathy

For purposes of this study, empathy was defined as “a reaction to the observed experiences of others” (Davis, 1983, p. 114). Specific dimensions

of empathy were studied by using Davis' IRI. Operationally, the students' level of empathy was measured by their scores on each of the subscales and their total score on pretests and posttests.

Variable: Age

Age was defined as the number of years that have elapsed since a student's birth.

Variable: College Major

College major was filled in by the student on the Information Sheet.

Training of Group Facilitators

Of the 7 facilitators, 5 were trained at the same time. One was trained separately because she facilitated the comparison group which required different protocol. One was trained separately because of her unavailability on facilitator-training day. Two weeks prior to the data collection, 5 facilitators met at Henson Hall on a Saturday morning for 2½ hours. All facilitators were licensed mental health professionals with a minimum of a Master's Degree in social work or another mental health field (see Appendix D for list of credentials).

They were given a training packet (See Appendix E) and were trained in the procedures by Dr. Bill Nugent. Each had recently viewed the movie

Higher Learning and knew the story and characters. Dr. Nugent reviewed questions for perspective taking exercises using fictitious characters and for the affective empathy activities. An illustrative role play was done to insure an understanding of the procedures. The facilitator who was absent on training day was trained by Dr. Nugent a few days before data collection day.

The comparison group facilitator was trained 2½ weeks before the data collection day. She was given a training packet and Dr. Nugent reviewed the cognitive approach procedures. It was emphasized that cognitive processing was the main approach for this group.

Treatment and Comparison Conditions

After participants signed the Informed Consent form and filled out the Information Sheet (See Appendices A & B), they filled out the IRI. As they finished the IRI, it was quickly scored and the paired block random assignment was done by a computer. While the IRI was scored, students were introduced to the facilitators of the training, given an overview of the day's agenda including division into two groups, location of bathrooms in the building, and information about the lunch break. After random assignment into the treatment or comparison groups, the activities varied for the two groups for the rest of the day.

Treatment Group

There was a total of 14 students and 6 facilitators (see Appendix D for a list of facilitators and their credentials) who all met together to start the affective empathy training. As part of the preliminary stage of the intervention, students were asked to remember situations when they experienced certain feelings and to write down the details of the experience. They must, therefore, have been able to exhibit the cognitive ability of identifying their own feelings. The list of emotions included: (1) anger, (2) frustration, (3) anxiety, (4) wanting to belong, (5) embarrassment, and (6) loneliness (see Appendix F for the worksheet). They were instructed to keep their “Anchored Feelings” worksheet for a later activity in their small groups.

Next the students in the experimental group watched the first 45 minutes of the movie *Higher Learning* (see Training Packet, Appendix E for details). Immediately prior to watching the movie, the facilitator pointed out two particular characters to watch. Both characters were students at a California college. Kristen, a freshman, is naive and desiring to fit in socially, and Billy is an upperclass fraternity member who also wants to meet the expectations of his peer group. While both characters are in an inebriated state, there is a scene depicting a controversial date rape. The students

watched the controversial scene for a second time but did not watch the rest of the movie.

Next the treatment group was divided into 3 subgroups, each with 2 facilitators. After introductions, a discussion of the Anchored/Referenced Feelings worksheet gave students a reference to feelings tied to actual personal experiences. This information was used in the next two activities to evoke vicarious emotional feelings.

In order to increase students' perspective taking skills, they were asked to put themselves in the "shoes" of each of these two movie characters and discuss what that character might be thinking and feeling. This activity involved cognitive processes which were expected to increase Perspective Taking scores. In order to increase Empathic Concern scores (affective empathy), next the students were asked to reference the identified feeling/emotion of the character with their anchored feelings from the earlier assignment (a personal experience), thereby increasing their own affective arousal. They were asked to stretch to whichever character they had the most difficulty understanding in order to see if they could take the perspective of that character and discuss what that character was feeling by using their own reference experiences, thereby increasing their affective Empathic Concern

scores.

Role plays of actual personal situations were an additional attempt at providing affective experiences. The student described a situation which he/she remembered as difficult or intense. Usually the situation was of an interpersonal nature with two people. The student chose two others in the group (one could be a facilitator) to play the people in a simulated re-enactment of the event, and the student directed the scene. When the others enacted the scene accurately, then the student took the role of the character other than himself/herself. The scene was then enacted a second time. This “being in the shoes of the other” provided a reenactment of a personal experience from the cognitive and emotional point of view of the other person. Questions were then asked of the student by other participants and facilitators in an effort to focus the student on what it was like to be “in the other person’s shoes” in the re-enacted event. Theoretically, vicariously experiencing these two conditions of both fictitious character and personal relationship could increase the likelihood of an affective empathic response at the time and also in the future. It was expected that Perspective Taking and Empathic Concern scores would increase from this type of training format.

Comparison Group

The comparison group met as one large group. There were 16 students in the group. This group did not experience the affective component of the training. Students watched the movie *Higher Learning* all the way through and answered questions in a discussion group at the end. Students were asked what the characters thought and felt in selected scenes, using cognitive processes only.

They were not asked to develop anchor/referenced feelings to answer the questions regarding character role-taking in the movie, nor did they participate in the personal role plays and role reversals. It was expected that Perspective Taking (cognitive empathy) scores alone would increase from this training approach.

CHAPTER IV.

RESULTS

Chapter IV provides information on results of the study. Included are demographic data of the students in the study, an analysis of the reliability of the IRI at prescore, postscore, and followup, analyses of the hypotheses including tests of assumptions of multiple regression and ANCOVA, intercorrelations of the IRI subscales, and post hoc analyses.

Demographic Data of Participants

Age

The 30 students in the study ranged in age from 19 to 52, a range of 33 years with a mean age of 24.60 (SD = 6.9). The distribution of age indicates a predominance of young adults: 93.3% were below the age of 30.

There were only two older adults, ages 43 and 52, and both were female.

Figure 7 show the age distribution.

Gender

The gender composition of the sample was predominantly female: males = 20% (N = 6), females = 80% (N = 24).

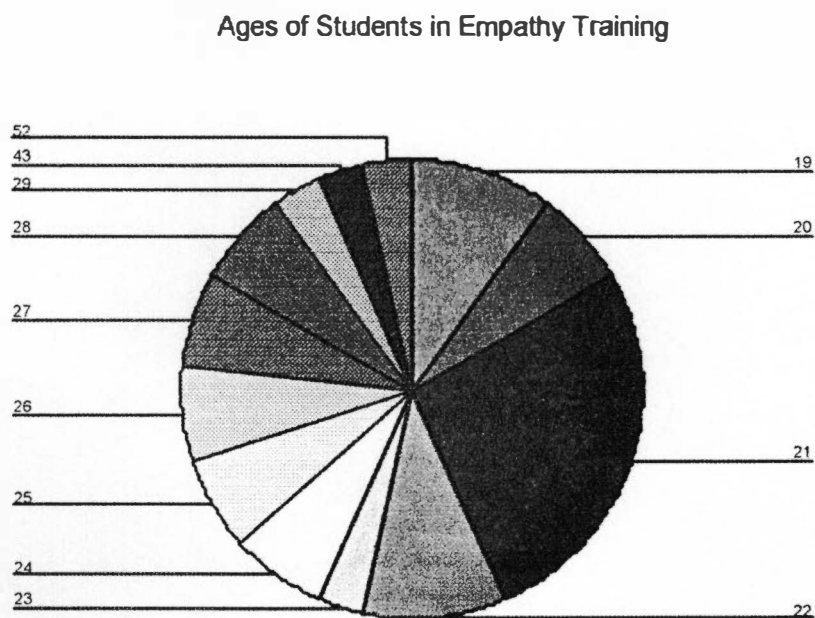
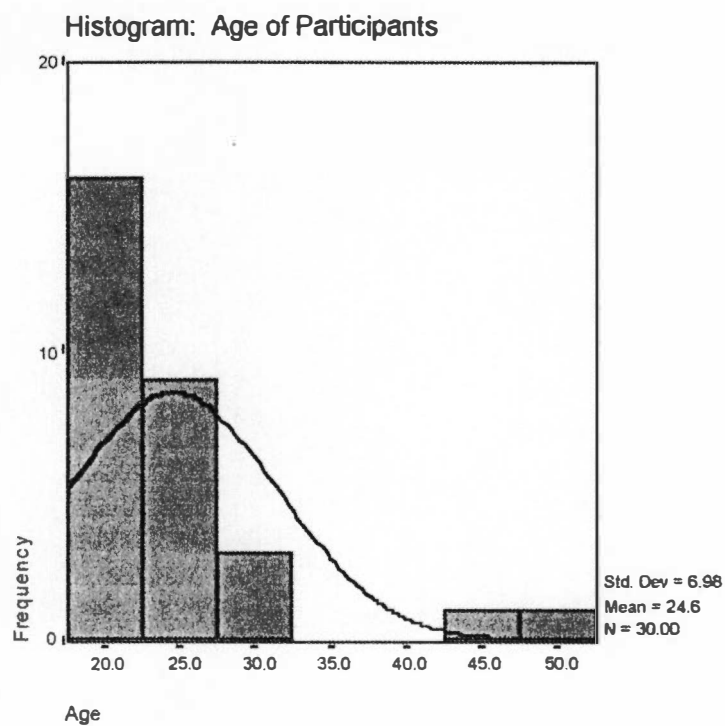


Figure 7. AGE OF RESEARCH PARTICIPANTS

College Major

The college major of participants indicated a predominance of psychology majors. Psychology majors accounted for 56.7% . Social work majors accounted for 20% . The remaining were an assortment of other majors. Figure 8 indicates the frequencies.

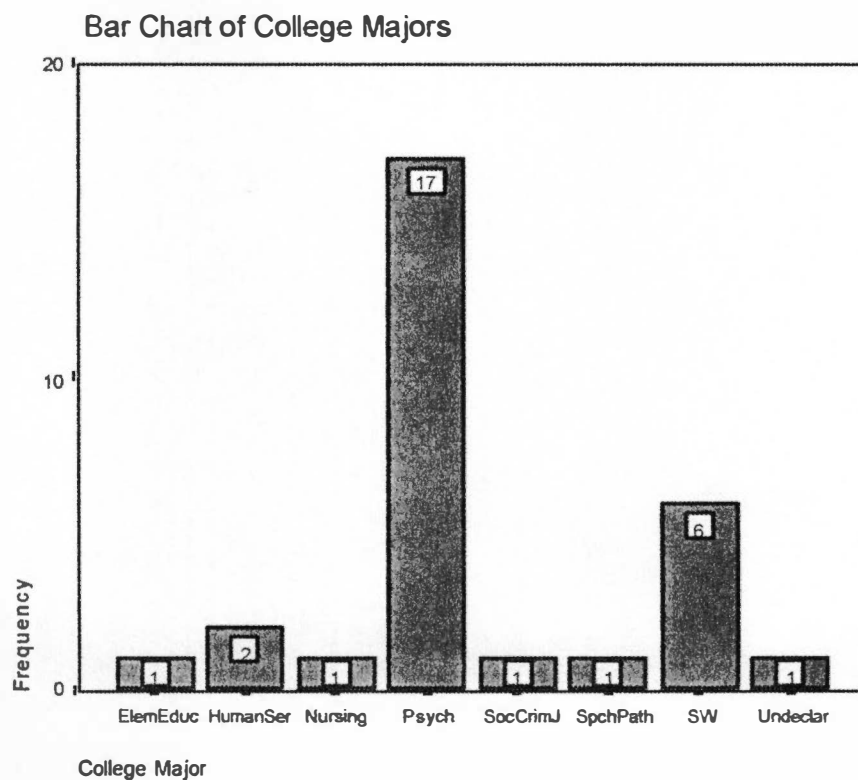


Figure 8. COLLEGE MAJOR

RELIABILITY OF SCORES

A reliability analysis was done on each prescore, postscore, and followup subscale to test for reliability. Coefficient alpha was estimated for each pretest subscale score and for each posttest subscale score. Results indicated that the alpha for all subscale scores was .70 or higher with a range of .74 to .85 for pretests and a range of .75 to .86 for posttests. Alpha for FS prescores was .77. The mean FS prescore was 18.53 with a standard deviation of 4.79. Alpha for PT prescores was .85. The mean of PT prescores was 17.60 with a standard deviation of 5.20. The alpha for PD prescores was .72. The mean PD prescore was of 10.47 with a standard deviation of 4.59. For EC prescores, the alpha was .81. The mean EC prescore was 20.53 with a standard deviation of 5.04.

The alpha for FS postscores was .82, with a mean FS postscore of 19.97 and a standard deviation of 5.29. For PT postscores, the alpha was .80, with a mean of PT postscores of 18.23 and a standard deviation of 4.58. The PD postscores alpha was .75, with a mean PD postscores of 9.97 and a standard deviation of 4.25. EC postscores had an alpha of .86, a mean of 20.97, and a standard deviation 4.99. The alpha, mean, and standard deviation of each subscale (pre, post, and followup) are listed in Table 6.

Table 6.

Internal Consistency (reliability) of 4 subscales of the IRI			
	α^1	mean	stan. dev.
Prescore Totals²			
FS (fantasy scale)	0.7431	18.5333	4.7903
PT (perspective taking)	0.8467	17.600	5.1968
PD (personal distress)	0.7233	10.4667	4.5918
EC (empathic concern)	0.8095	20.5333	5.036
Postscore Totals²			
FS	0.8186	19.9667	5.2881
PT	0.8024	18.2333	4.5764
PD	0.7501	9.9667	4.2547
EC	0.8619	20.9667	4.9861
Followup Totals³			
FS	.9041	17.9286	5.9375
PT	.8431	19.3214	4.2692
PD	.8899	8.7143	5.4014
EC	.8210	21.7500	4.1332

¹ Chronbach's alpha² N= 30³ N= 28

Note that the followup reliabilities were based upon a sample of 28 because there were two missing cases of data. Alphas indicate satisfactory internal consistency of the IRI in this study.

Equivalence of Groups at Pretest

In order to test group equivalence at pretest, i.e., whether or not random assignment was successful, four independent samples t-tests were computed. Results for each subscale are reported in Figures 9 - 12.

Evidence from the t-tests suggests that groups appear to have been equivalent at pretest. Initially, groups were block randomly assigned based upon ECprescore and gender. ECprescores in the experimental group and ECprescores in the comparison group were equivalent based upon results of the t-test [$t(28) = .468, p = .643$ (2-tailed)]. It appears that the block random assignment based upon ECprescores was effective.

Although the other prescore subscales were not used for establishing equivalence, similar results were found with the PT and PD prescores. FSprescores, however, were not equivalent [$t(28) = -3.08, p = .005$ (2-tailed)]. Mean FS of the comparison group was 20.75, and mean FS of the treatment group was 16. The comparison group on average scored significantly higher than the treatment group on FSprescores. The

Group Statistics

	Tx (0) Control	N	Mean	Std. Deviation	Std. Error Mean
EC pretotal	Tx	14	21.00	4.77	1.28
	Control	16	20.13	5.38	1.34

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Mean	
EC pretotal	Equal variances assumed	.122	.73	468	28	.643	.88	1.87	-2.95	4.70
	Equal variances not assumed			472	27.990	.640	.88	1.85	-2.92	4.67

**Figure 9. ECpretotal T-Test: GROUP STATISTICS AND
INDEPENDENT SAMPLES TEST**

Group Statistics

	Tx (0) Control	N	Mean	Std. Deviation	Std. Error Mean
PT	Tx	14	18.71	4.89	1.31
pretotal	Control	16	16.63	5.41	1.35

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Differen ce	Std. Error Differen ce	95% Confidence Interval of the Mean	
PT	Equal variances assumed	.016	.899	1.1	28	.280	2.09	1.89	-1.79	5.97
	Equal variances not assumed			1.1	27.963	.276	2.09	1.88	-1.77	5.94

Figure 10. PTpretotal T-TEST: GROUP STATISTICS AND INDEPENDENT SAMPLES TESTS

Group Statistics

	Tx (0) Control	N	Mean	Std. Deviation	Std. Error Mean
FS	Tx	14	16.00	3.82	1.02
pretotal	Control	16	20.75	4.52	1.13

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tail ed)	Mean Differen ce	Std. Error Differen ce	95% Confidence Interval of the Mean	
									Lower	Upper
FS	Equal variances assumed	.344	.562	-3.08	28	.005	-4.75	1.54	-7.91	-1.59
pretotal	Equal variances not assumed			-3.12	27.975	.004	-4.75	1.52	-7.87	-1.63

Figure 11. FSpretotal T-TEST: GROUP STATISTICS AND INDEPENDENT SAMPLES TESTS

Group Statistics

	Tx (0) Control	N	Mean	Std. Deviation	Std. Error Mean
PD	Tx	14	9.57	4.48	1.20
pretotal	Control	16	11.25	4.68	1.17

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tail ed)	Mean Differ ence	Std. Error Differ ence	95% Confidence Interval of the Mean	
									Lower	Upper
PD	Equal variances assumed	.036	.85	.999	28	.326	-1.68	1.68	-5.12	1.76
pretotal	Equal variances not assumed			-1.0	27.75	.325	-1.68	1.68	-5.11	1.75

Figure 12. PDpretotal T-TEST: GROUP STATISTICS AND INDEPENDENT SAMPLES TESTS

comparison group also scored significantly higher on FSpotscores than the treatment group [$t(28) = -2.527, p = .017$ (2-tailed)]. A check for gender equivalence in groups was made. Gender by group is reported in Table 7.

Although the assignment of males to groups is unequal, a Chi Square analysis indicates a nonsignificant difference $\chi^2(1) = .535, p = .46$. The groups were essentially equal by gender.

Intercorrelations of the IRI Scales

Based on previous research and theory (Davis, 1983, pp. 116, 121-123), it was expected that perspective taking, empathic concern, and personal distress scores would relate in certain ways. Specifically, it was anticipated that (1) the PT and EC scale scores would be significantly and positively

Table 7. Gender by Group: Treatment or Comparison

	Tx	Comp	N
<u>Males</u>	2	4	6
<u>Females</u>	12	12	24
TOTAL	14	16	30

correlated, and (2) that **PD** and **PT** would be either independent or negatively correlated. Additionally, it was expected that there would be a positive relation (though not necessarily significant) between **FS** and **EC** based upon Davis' work alone. Results of the correlational analysis at pretest, posttest, and followup are reported in Figures 13 - 15 and Table 8.

Results support the expected relationships. **EC** at pretest, posttest, and followup showed a stronger correlation with **FS** than Davis found ($r = .442$, $.411$, and $.440$ compared to $r = .33$) and all were significant at the $.05$ level except for followup, but it is in the expected direction. The correlations between **EC** and **PT** were consistently significantly and positively related as expected ($.651$ at pre, $.635$ at post, $.753$ at followup, and $\sim .31.5$ and $.35$ for Davis's samples). Also as expected, **PD** and **PT** were either independent or slightly negatively related. Results are consistent with Davis's research regarding validity of the scales, which adds to the evidence of validity of the scales in this sample.

Assumption of ANCOVA

Homogeneity of Regression Coefficients

In order to rule out any interaction between pretests and group so that main effects could be interpreted, four regression equations were tested. The

Correlations

		EC pretotal	FS pretotal	PD pretotal	PT pretotal
Pearson Correlation	ECpre	1.000	.442*	-.031	.651**
	FSpre	.442*	1.000	.134	.237
	PDpre	-.031	.134	1.000	-.134
	PTpre	.651**	.237	-.134	1.000
Sig. (2-tailed)	ECpre	.	.014	.873	.000
	FSpre	.014	.	.480	.206
	PDpre	.873	.480	.	.482
	PTpre	.000	.206	.482	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		EC posttotal	FS posttotal	PD posttotal	PT posttotal
Pearson Correlation	ECposttotal	1.000	.411*	-.028	.635**
	FSposttotal	.411*	1.000	.423*	.288
	PDposttotal	-.028	.423*	1.000	-.065
	PTposttotal	.635**	.288	-.065	1.000
Sig. (2-tailed)	ECposttotal	.	.024	.885	.000
	FSposttotal	.024	.	.020	.123
	PDposttotal	.885	.020	.	.732
	PTposttotal	.000	.123	.732	.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

**Figure 13. CORRELATIONAL ANALYSIS:
at PRETEST and POSTTEST**

Correlations

		ECfollow up	FSfollow -up	PDfollow up	PTfollow up
Pearson Correlation	ECfollowup	1.000	.440	-.114	.753**
	FSfollowup	.440	1.000	.631**	.360
	PDfollowup	-.114	.631**	1.000	.007
	PTfollowup	.753**	.360	.007	1.000
Sig. (2-tailed)	ECfollowup	.	.015	.548	.000
	FSfollowup	.015	.	.000	.051
	PDfollowup	.548	.000	.	.970
	PTfollowup	.000	.051	.970	.

** . Correlation is significant at the 0.01 level (2-tailed).

**Figure 14: CORRELATIONAL ANALYSIS:
at FOLLOWUP**

Coefficients^a

Model		Unstandardized Coefficients		Standar dized Coeffie nts	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.847	4.269		.433	.669
	EC pretotal	.929	.199	.938	4.678	.000
	Tx (0) Control (1)	6.633	5.464	.675	1.214	.236
	InteractionECpre& Group	-.326	.258	-.713	-1.264	.217

a. Dependent Variable: EC posttotal

Figure 15. TESTING FOR INTERACTION OF ECpre & GROUP

Table 8
Davis's Intercorrelations

Intercorrelations of the Interpersonal Reactivity Index Subscales for Males and Females in Two Samples

	Sample 1 ^a						Sample 2 ^b					
	Perspective Taking		Empathic Concern		Personal Distress		Perspective Taking		Empathic Concern		Personal Distress	
	M	F	M	F	M	F	M	F	M	F	M	F
Fantasy	.10	.12	.30	.31	.16	.04	.13	.15	.36	.35	.14	-.08
Perspective Taking			.33	.30	-.16	-.29			.32	.38	-.21	-.32
Empathic Concern					.11	.01					.22	-.03

Note: Correlation coefficients of .10 or greater are significant beyond the .05 level

. M = males, F = females.

^a Sample 1: spring 1979, *N*s = 392 males and 378 females

^b Sample 2: fall 1980, *N*s = 225 males and 235 females

Davis, M. (1983). Measuring Individual Differences in Empathy: Evidence for a Multidimensional Approach. *Journal of Personality and Social Psychology*, 44, 1, p.122.

coefficient tables for each of the regressions are presented in Figures 15-18.

Since the interaction term in Figure 15 was nonsignificant, it was appropriate to test for main effects of group on ECpost. Since the interaction term in Figure 16 was nonsignificant, it was appropriate to test for main effects of group on PTpost. Again, results in Figure 17 provide evidence that the regression lines were parallel and that the interactions could be ruled out.

Results in Figure 18 indicate that there was no interaction between FSpre and group.

Coefficients^a

Model		Unstand ardized Coefficie nts	Standar dized Coefficie nts	t	Sig.
		Std. Error	Beta		
1	(Constant)	3.559		2.108	.045
	PT pretotal	.184	.698	3.332	.003
	Tx (0) Control (1)	4.469	-.127	-.256	.800
	InteractionPTpre &Group	.241	.121	.247	.807

a. Dependent Variable: PT posttotal**Figure 16. TESTING FOR INTERACTION OF PTpre & GROUP****Coefficients^a**

Model		Unstandardized Coefficients	Standar dized Coefficie nts	t	Sig.
		Std. Error	Beta		
1	(Constant)	1.690		1.176	.250
	PD pretotal	.161	.783	4.506	.000
	Tx (0) Control (1)	2.426	.059	.203	.841
	InteractionPDpre &Group	.216	.033	.098	.923

a. Dependent Variable: PD posttotal**Figure 17. TESTING FOR INTERACTION OF PDpre & GROUP**

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.150	3.369		.341	.736
	FS pretotal	1.026	.205	.930	5.001	.000
	Tx (0) Control (1)	2.105	4.804	.202	.438	.665
	InteractionFSpre& Group	-.120	.261	-.250	-.459	.650

a. Dependent Variable: FS posttotal

Figure 18. TESTING FOR INTERACTION OF FSpre & GROUP

Analysis of the Hypotheses

Hypothesis 1

Hypothesis #1 stated that females would score higher on prescores than males. A regression of prescore totals for each subscale was run. The results are reported with mean, standard deviation, standard error of the mean, t score, df, and p values on prescores for males and females on subscales in Table 9.

Overall with alpha set at .10, the differences failed to obtain significance; therefore, **hypothesis #1 was not supported**. On three of the

Table 9. Pretest Subscale Scores by Gender

Gender		N	Mean	St. Deviation	Std. Error Mean	t	df	Sig. (2 tailed)
PT pretotal	Male	6	14.67	4.93	2.01	1.59	28	0.12
	Female	24	18.33	5.10	1.04			
PD pretotal	Male	6	3.19	3.19	1.30	.37	28	0.71
	Female	24	4.92	4.92	1.01			
EC pretotal	Male	6	18.17	4.88	1.99	1.30	28	0.20
	Female	24	21.13	5.00	1.02			
FS pretotal	Male	6	18.67	4.08	1.67	-.08	28	0.94
	Female	24	18.50	5.03	1.03			

subscales the difference was in the projected direction. Females scored higher on pretests of subscales and total IRI with the exception of the FS subscale. On PT the difference was 3.667. On PD the difference was only .792, and on EC it was 2.958. On the FS subscale there was a difference of -.167.

Hypothesis 2

Hypothesis #2 stated that there would be an EC and PT posttest difference between the experimental and comparison groups when controlling for prescores and gender. Therefore, it was predicted that the pretest-adjusted posttest mean empathy scores for the treatment group would

be greater than for the comparison group. However, non-directional hypotheses were tested because a result in either direction would be important. After testing for and ruling out interactions between pretest and group (see previous section), two **separate** regression based ANCOVA equations were computed, one for each of the subscales PT and EC.. An interaction effect of group and gender was checked and ruled out. A regression was run to test the main effect of empathy training relative to the comparison group on posttest IRI scores, when controlling for all four pretest IRI scores and gender. Gender was entered into the regression equation in block 1, pretest IRI scores were entered in block 2, and empathy training/comparison group in block 3. It was hypothesized that the coefficient B_6 would be statistically significant for EC and PT. The regression equation #1 for EC was as follows:

$$\text{Posttest}_{(EC)} = B_0 + B_{1(\text{gender})} + [B_{2(\text{preEC})} + B_{3(\text{prePT})} + B_{4(\text{prePD})} + B_{5(\text{preFS})}] + B_{6(\text{group})}$$

Assumptions of normality, linearity, and homogeneity of variance were checked. The histogram of standardized residuals of the dependent variable suggests no serious departures from normality. The probability plot indicates a linear relationship. The scatterplot of studentized residuals against the predicted values suggests that the assumption of homogeneity of variance .

was plausible for these data. These plots are presented in Figures 19-20.

Results of equation #1 are provided in the SPSS regression tables for ECpost (Figures 22 & 23). Clearly the interaction term can be ruled out [$t(22) = -.467, p = .645$]. In block 3 before the interaction term was entered, the group variable was nonsignificant [$t(22) = -.716, p = .481$]. With alpha set at .10, there appears to be no evidence that EC was significantly different between groups after treatment. Using Adjusted R Square, 51% of the variance is explained by Model 3 as shown in the Model Summary (Figure 22).

The hypothesis that there would be a significant difference of ECpost between groups has not been supported. The hypothesis that there would be a significant difference of EC posttotal between groups has not been supported. The regression equation for PT was as follows:

$$\text{Posttest}_{(PT)} = B_0 + B_{1(\text{gender})} + [B_{2(\text{preEC})} + B_{3(\text{prePT})} + B_{4(\text{prePD})} + B_{5(\text{preFS})}] + B_{6(\text{group})}$$

The regression assumptions of normality, linearity, and homogeneity of variance were checked. The histogram of standardized residuals of the dependent variable suggested that the residuals may have been slightly skewed. The probability plot indicates a linear relationship. The scatterplot of studentized residuals against the predicted values suggests that the

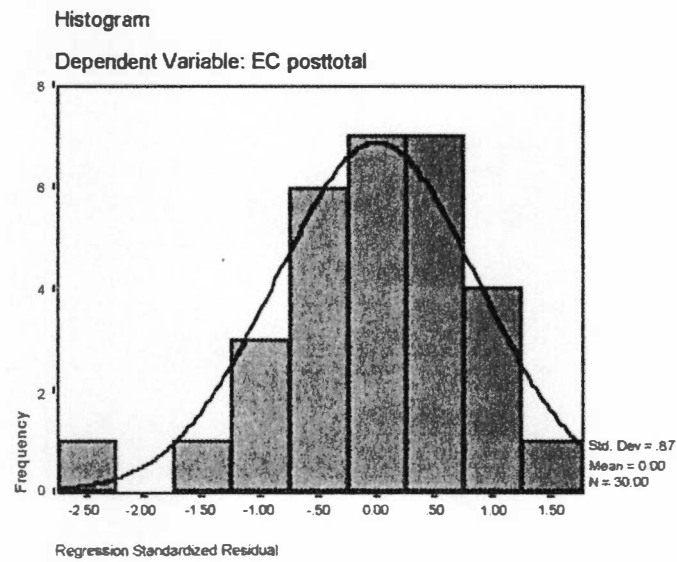


Figure 19. HISTOGRAM OF ECposttotal

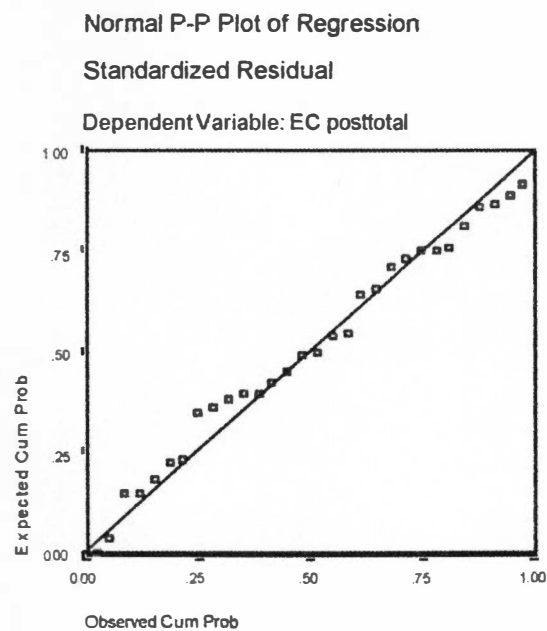


Figure 20. NORMAL P-P PLOT OF REGRESSION ECposttotal

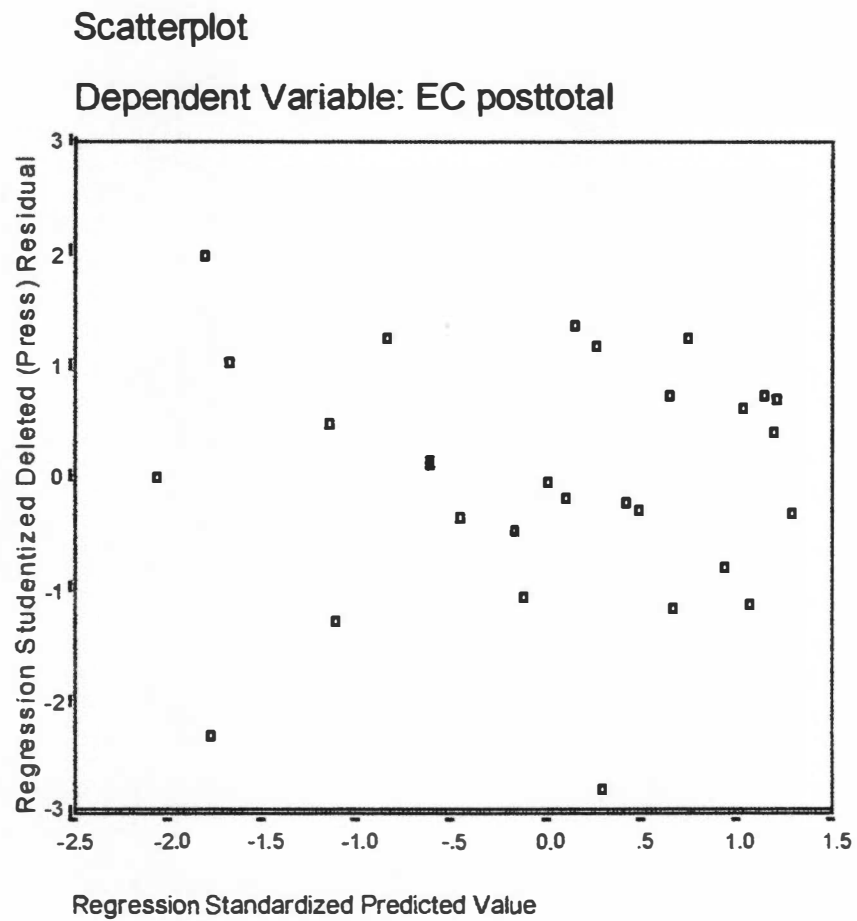


Figure 21. SCATTERPLOT ECposttotal

Model Summary^{a,b}

Model	Variables		R	R Square	Adjusted R Square	Std. Error of the Estimate
	Entered	Removed				
1	Gender ^d	.	.320	.102	.070	4.81
2	FS pretotal, PD pretotal, PT ^{e,d} pretotal, EC pretotal	.	.774	.599	.516	3.47
3	Tx (0) Control^f(1)	.	.780	.608	.506	3.51
4	Interaction- gender & group ^{g,d}	.	.782	.612	.488	3.57

a. Dependent Variable: EC posttotal

b. Method: Enter

c. Independent Variables: (Constant), Gender

d. All requested variables entered.

e. Independent Variables: (Constant), Gender, FS pretotal, PD pretotal, EC pretotal

f. Independent Variables: (Constant), Gender, FS pretotal, PD pretotal, EC pretotal, Tx (0) Control (1)

g. Independent Variables: (Constant), Gender, FS pretotal, PD pretotal, EC pretotal, Tx (0) Control (1), Interaction- gender & group

Figure 22. MODEL SUMMARY for EQUATION 1 (page 93).

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.833	1.963		9.085	.000
	Gender	3.917	2.195	.320	1.785	.085
2	(Constant)	4.458	3.527		1.264	.218
	Gender	2.304	1.686	.188	1.367	.184
	EC pretotal	.671	.184	.677	3.637	.001
	FS pretotal	.167	.154	.160	1.082	.290
	PD pretotal	-8.2E-02	.145	-.075	-.562	.579
	PT pretotal	-7.6E-02	.168	-.079	-.452	.656
3	(Constant)	4.493	3.564		1.261	.220
	Gender	2.278	1.703	.186	1.337	.194
	EC pretotal	.641	.191	.647	3.355	.003
	FS pretotal	.248	.193	.238	1.288	.211
	PD pretotal	-7.3E-02	.147	-.067	-.494	.626
	PT pretotal	-9.7E-02	.173	-.101	-.561	.580
	Tx (0)	-1.186	1.656	-.121	-.716	.481
	Control (1)					
4	(Constant)	3.411	4.303		.793	.436
	Gender	3.269	2.738	.267	1.194	.245
	EC pretotal	.637	.194	.644	3.278	.003
	FS pretotal	.242	.196	.232	1.231	.231
	PD pretotal	-6.5E-02	.150	-.060	-.433	.669
	PT pretotal	-7.9E-02	.180	-.082	-.440	.664
	Tx (0)	.204	3.417	.021	.060	.953
	Control (1)					
	Interaction-gender & group	-1.643	3.515	-.164	-.467	.645

Figure 23. COEFFICIENTS. Dependent variable = EC posttotal

assumption of homogeneity of variance was plausible for these data. The plots are presented in Figures 24-26.

Results of fitting this equation to the data are provided in the SPSS tables in Figures 27 & 28. Using adjusted R Square, 47% of the variance in PTposttotal is explained by model 3 in the model summary (Figure 27).

Results in Figure 28 show that the interaction term can be dropped; $t = -.174$ with $p = .864$. In block 3 without the interaction product and with alpha set at .10, the main effect group variable was again statistically nonsignificant; $t = -.398$ and $p = .694$. **The hypothesis that PT posttotals would be significantly different between groups was not supported.**

Research Question

This question was: Can males and females gain equally in empathy skills regardless of whether they are in the treatment or comparison groups? It was expected that there would be no interaction between gender and group treatment. Results from the full equations for ECpost and PTpost are in the tables on pages 97 & 101. Results were found to follow the trends found in the literature. that is, gender has not been shown to be a predictor for differences in ability to increase empathy skill through training.

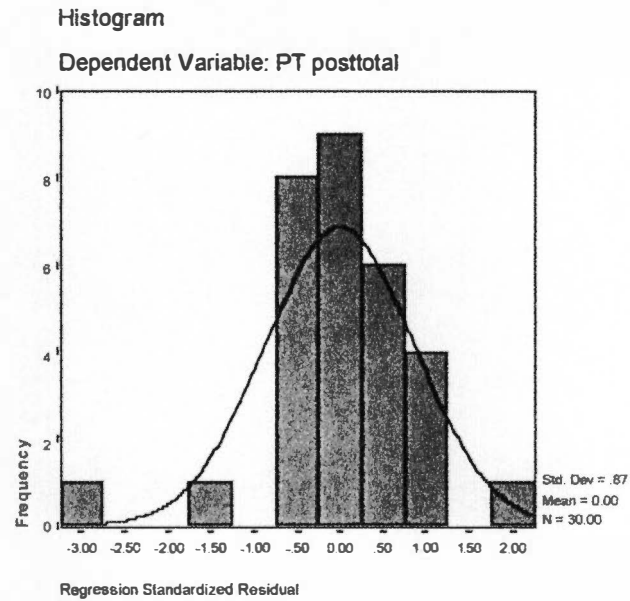


Figure 24. HISTOGRAM OF PTposttotal

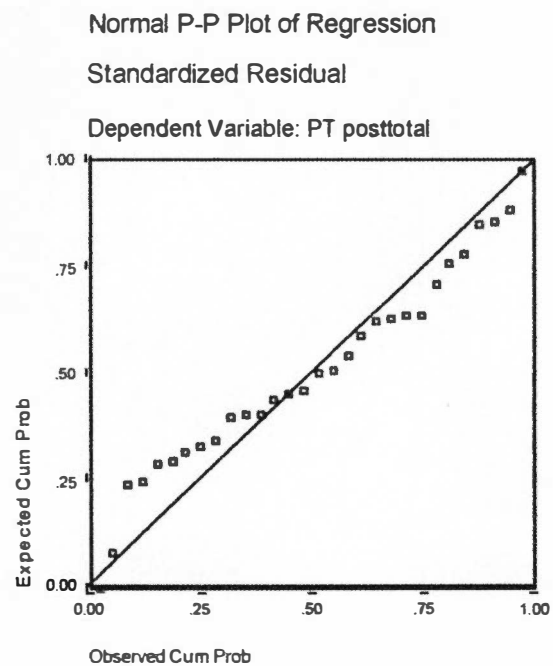


Figure 25. NORMAL P-P PLOT OF REGRESSION PTposttotal

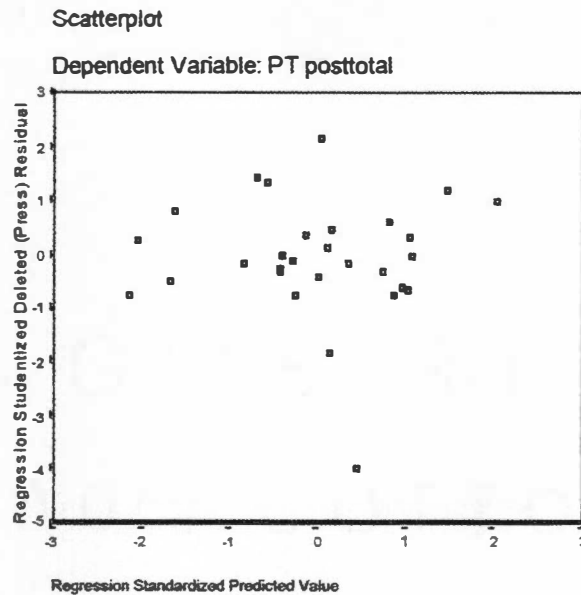


Figure 26. SCATTERPLOT PTposttotal

Follow-up Results

Six weeks after the initial data collection, followup data were collected by telephone. To test the original hypotheses at follow-up, the same regressions were tested using follow-up data and tests of assumptions were also checked. Mean substitution was used for two cases of missing followup data; this represented 6.7% substitution. With alpha set at .05 to cover Type I errors, significance was not found at follow-up; however, when alpha was set at .10 to cover Type II errors, significance was found for EC at followup. At followup participants in the treatment group scored

Model Summary^{a,b}

Model	Variables		R	R Square	Adjusted R Square	Std. Error of the Estimate
	Entered	Removed				
1	Gender ^{c,d}	.	.359	.129	.098	4.35
2	FS pretotal, PD pretotal, PT pretotal, EC pretotal ^{e,d}	.	.760	.577	.489	3.27
3	Tx (0) Control (1) ^{f,g}	.	.761	.580	.470	3.33
4	Interaction-gender & group ^{g,d}	.	.762	.580	.447	3.40

a. Dependent Variable: PT posttotal

b. Method: Enter

c. Independent Variables: (Constant), Gender

d. All requested variables entered.

e. Independent Variables: (Constant), Gender, FS pretotal, PD pretotal, PT pretotal, EC pretotal

f. Independent Variables: (Constant), Gender, FS pretotal, PD pretotal, PT pretotal, EC pretotal, Tx (0) Control (1)

g. Independent Variables: (Constant), Gender, FS pretotal, PD pretotal, PT pretotal, EC pretotal, Tx (0) Control (1), Interaction-gender & group

Figure 27. MODEL SUMMARY for REGRESSION of PT (p. 98)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.000	1.774		8.453	.000
	Gender	4.042	1.984	.359	2.037	.051
2	(Constant)	5.264	3.327		1.582	.127
	Gender	1.916	1.590	.170	1.205	.240
	FS pretotal	8.1E-02	.145	.085	.558	.582
	PD pretotal	1.6E-02	.137	.016	.118	.907
	PT pretotal	.636	.159	.722	4.001	.001
	EC pretotal	-6.9E-02	.174	-.076	-.399	.693
3	(Constant)	5.283	3.387		1.560	.132
	Gender	1.903	1.619	.169	1.175	.252
	FS pretotal	.124	.183	.130	.678	.505
	PD pretotal	2.1E-02	.140	.021	.149	.883
	PT pretotal	.625	.164	.710	3.807	.001
	EC pretotal	-8.5E-02	.181	-.094	-.470	.643
	Tx (0) Control (1)	-.627	1.573	-.070	-.398	.694
4	(Constant)	4.899	4.107		1.193	.246
	Gender	2.254	2.614	.200	.862	.398
	FS pretotal	.122	.187	.128	.650	.522
	PD pretotal	2.3E-02	.144	.024	.164	.872
	PT pretotal	.631	.172	.717	3.678	.001
	EC pretotal	-8.6E-02	.186	-.095	-.466	.646
	Tx (0) Control (1)	-.134	3.261	-.015	-.041	.967
	Interaction- gender & group	-.582	3.355	-.063	-.174	.864

a. Dependent Variable: PT posttotal

Figure 28. COEFFICIENTS. Dependent variable = PT posttotal

significantly higher on EC than participants in the comparison group.

Hypothesis #2 was supported for EC at followup. ECfollowup was significantly different between groups; however, PTfollowup was not significantly different between groups. Summary data are reported in Table 10.

Post Hoc Analyses

Additional analyses yielded interesting findings. When an interaction between age and group was tested at posttest, the results were statistically significant. The following equation was fitted with EC the dependent variable.:

$$\text{Post}_{(\text{EC})} = B_0 + [B_{1(\text{preEC})} + B_{2(\text{prePT})} + B_{3(\text{prePD})} + B_{4(\text{preFS})}] + B_{5(\text{age})} + B_{6(\text{gender})} \\ + B_{7(\text{group})} + B_{8(\text{age} \times \text{group})}.$$

Table 10.
Effect of Group on EC and PT at Follow-up
Followup Data with Mean Substitution for 2 Cases of Missing Data

	t	sig
ECfollowup controlling for 5 covariates	-1.73	.097*
PTfollowup controlling for 5 covariates	-1.26	0.22

***Significant at .10 level**

The interaction term was found significant [$t(21) = 2.961$, $p = .007$]. This can be interpreted as meaning that expected ECposttest scores increased as age increased in the comparison group, but decreased as age increased in the treatment group. Figures 29-31 provide the descriptive statistics, model summary, and coefficients. Using adjusted R Square (Figure 30), the model summary indicates that 62% of the variance in ECpost was accounted for by the model.

Plotting the Regression Lines

In order to plot the interaction on a graph, the regression equation was run for the full model including the interaction term. From the equation

Descriptive Statistics

	Mean	Std. Deviation	N
ECposttotal	20.97	4.99	30
FS pretotal	18.53	4.79	30
EC pretotal	20.53	5.04	30
PD pretotal	10.47	4.59	30
PT pretotal	17.60	5.20	30
Age	24.60	6.98	30

Figure 29. DESCRIPTIVE STATISTICS. Post Hoc Analyses

Model Summary^{a,b}

Model	Variables		R	R Square	Adjusted R Square	Std. Error of the Estimate
	Entered	Removed				
1	PT pretotal, PD pretotal, FS pretotal, EC pretotal ^{c,d}	.	.754	.568	.499	3.53
2	Gender, Age, Tx (0) Control (1) ^{e,d}	.	.780	.609	.484	3.58
3	Interaction of Age & Group ^{f,c}	.	.851	.724	.619	3.08

a. Dependent Variable: EC posttotal

b. Method: Enter

c. Independent Variables: (Constant), PT pretotal, PD pretotal, FS pretotal, EC pretotal

d. All requested variables entered.

e. Independent Variables: (Constant), PT pretotal, PD pretotal, FS pretotal, EC pretotal, Gender, Age, Tx (0) Control (1)

f. Independent Variables: (Constant), PT pretotal, PD pretotal, FS pretotal, EC pretotal, Gender, Age, Tx (0) Control (1), Interaction of Age & Group

Figure 30. MODEL SUMMARY. Dependent variable = EC posttotal

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.240	3.540		1.480	.151
	FS pretotal	.136	.155	.130	.877	.389
	EC pretotal	.700	.186	.707	3.756	.001
	PD pretotal	-5.5E-02	.146	-.051	-.379	.708
	PT pretotal	-3.3E-02	.168	-.034	-.195	.847
2	(Constant)	4.029	4.639		.869	.394
	FS pretotal	.251	.198	.241	1.270	.218
	EC pretotal	.647	.199	.654	3.248	.004
	PD pretotal	-6.8E-02	.153	-.062	-.441	.663
	PT pretotal	-.106	.184	-.110	-.573	.573
	Age	1.68E-02	.104	.023	.162	.873
	Gender	2.252	1.748	.184	1.289	.211
	Tx (0)					
	Control (1)	-1.212	1.700	-.123	-.713	.483
3	(Constant)	16.112	5.705		2.824	.010
	FS pretotal	.121	.175	.117	.692	.496
	EC pretotal	.545	.175	.550	3.116	.005
	PD pretotal	3.36E-03	.134	.003	.025	.980
	PT pretotal	4.17E-03	.163	.004	.026	.980
	Age	-.400	.167	-.559	-2.400	.026
	Gender	2.008	1.505	.164	1.334	.196
	Tx (0)					
	Control (1)	-14.913	4.852	-1.518	-3.074	.006
	Interaction of Age & Group					
		.578	.195	1.580	2.961	.007

a. Dependent Variable: EC posttotal

Figure 31. COEFFICIENTS . Dependent variable = EC posttotal

overall mean prescores for the four covariates were selected: $\bar{x} EC_{pre} = 20.53$, $\bar{x} FS_{pre} = 18.53$, $\bar{x} PD_{pre} = 10.47$, $\bar{x} PT_{pre} = 17.60$. Figures 32 & 33 are the SPSS tables providing descriptive statistics and coefficients. Coefficients in Figure 33 are for the regression ECpost controlling for age, gender, group, and interaction.

Since 80% of the participants were female, and both of the oldest participants were female, female gender (coded as 1) was used to calculate the regression lines. Oldest and youngest ages were used to provide two points on each line for each group. Group was coded 0 for treatment and 1 for comparison. In the comparison group, the oldest age was 52 and the youngest age was 19. In the treatment group, the oldest age was 43 and the youngest age was 21. Substituting mean prescores for the covariates and using the lowest and highest ages in each of the two groups, the four regression equations were computed as indicated in Figures 34 & 35.

In the comparison group, predicted ECpost for the 52 year old was 26. and was 20 for the 19 year old. In the treatment group, predicted ECpost for the 43 year old was 14.5 and was 23 for the 21 year old. Using these four points the two regression lines were plotted, indicating a disordinal interaction as depicted in Figure 36.

Descriptive Statistics

	Mean	Std. Deviation	N
EC posttotal	20.97	4.99	30
Age	24.60	6.98	30
EC pretotal	20.53	5.04	30
FS pretotal	18.53	4.79	30
PD pretotal	10.47	4.59	30
PT pretotal	17.60	5.20	30

Figure 32. DESCRIPTIVE STATISTICS. Interaction**Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.112	5.705		2.824	.010
	Age	-.400	.167	-.559	-2.400	.026
	Gender	2.008	1.505	.164	1.334	.196
	Tx (0) Control (1)	-14.913	4.852	-1.518	-3.074	.006
	EC pretotal	.545	.175	.550	3.116	.005
	FS pretotal	.121	.175	.117	.692	.496
	PD pretotal	3.36E-03	.134	.003	.025	.980
	PT pretotal	4.17E-03	.163	.004	.026	.980
	Interaction of Age & Group	.578	.195	1.580	2.961	.007

a. Dependent Variable: EC posttotal**Figure 33. COEFFICIENTS. Dependent variable = EC posttotal**

Computing the Interactions

$$Y = 16.112 + (-.400)(\text{age}) + (2.008)(\text{gender}) + (-14.913)(\text{Group}) +$$

$$(.545)(\text{ECpre}) + (.121)(\text{FSpre}) + (3.36\text{E-}03)(\text{PDpre}) +$$

$$(4.17\text{E}03)(\text{PTpre}) + (.578)(\text{Age*Group})$$

For oldest:

$$Y = 16.112 + (-.400)(\mathbf{52}) + (2.008)(1) + (-14.913)(1) + (.545)(20.53) +$$

$$(.121)(18.53) + (.00336)(10.47) + (.00417)(17.60) + (.578)(\mathbf{52})(1) =$$

$$26.0025 = 26$$

For youngest:

$$Y = 16.112 + (.400)(\mathbf{19}) + (2.008)(1) + (-14.913)(1) + (.545)(20.13) +$$

$$(.121)(18.53) + (.00336)(10.47) + (.00417)(17.60) + (.578)(\mathbf{19})(1) =$$

$$19.91 = 20$$

Figure 34. COMPUTING THE INTERACTIONS:

ECpost for Comparison Group (controlling for age, gender, 4 covariates, with mean substitution for 4 covariates, with highest and lowest ages, for females)

Computing the Interactions

$$Y = 16.112 + (.400)(age) + (2.008)(gender) + (-14.913)(Group) +$$

$$(.545)(ECpre) + (.121)(FSpre) + (3.36E-03)(PDpre) +$$

$$(4.17E03)(PTpre) + (.578)(Age*Group)$$

For oldest:

$$Y = 16.112 + (-.400)(43) + (2.008)(1) + (-14.913)(0) + (.545)(20.53) +$$

$$(.121)(18.53) + (.00336)(10.47) + (.00417)(17.60) + (.578)(43)(0) =$$

$$14.46 = 14.5$$

For youngest:

$$Y = 16.112 + (-.400)(21) + (2.008)(1) + (-14.913)(0) + (.545)(20.53) +$$

$$(.121)(18.53) + (.00336)(10.47) + (.00417)(17.60) + (.578)(21)(0) =$$

$$23.26 = 23$$

Figure 35. COMPUTING THE INTERACTIONS:

**ECpost for Treatment Group (controlling for age, gender,
mean substitution for 4 covariates , with highest and lowest
ages, for females)**

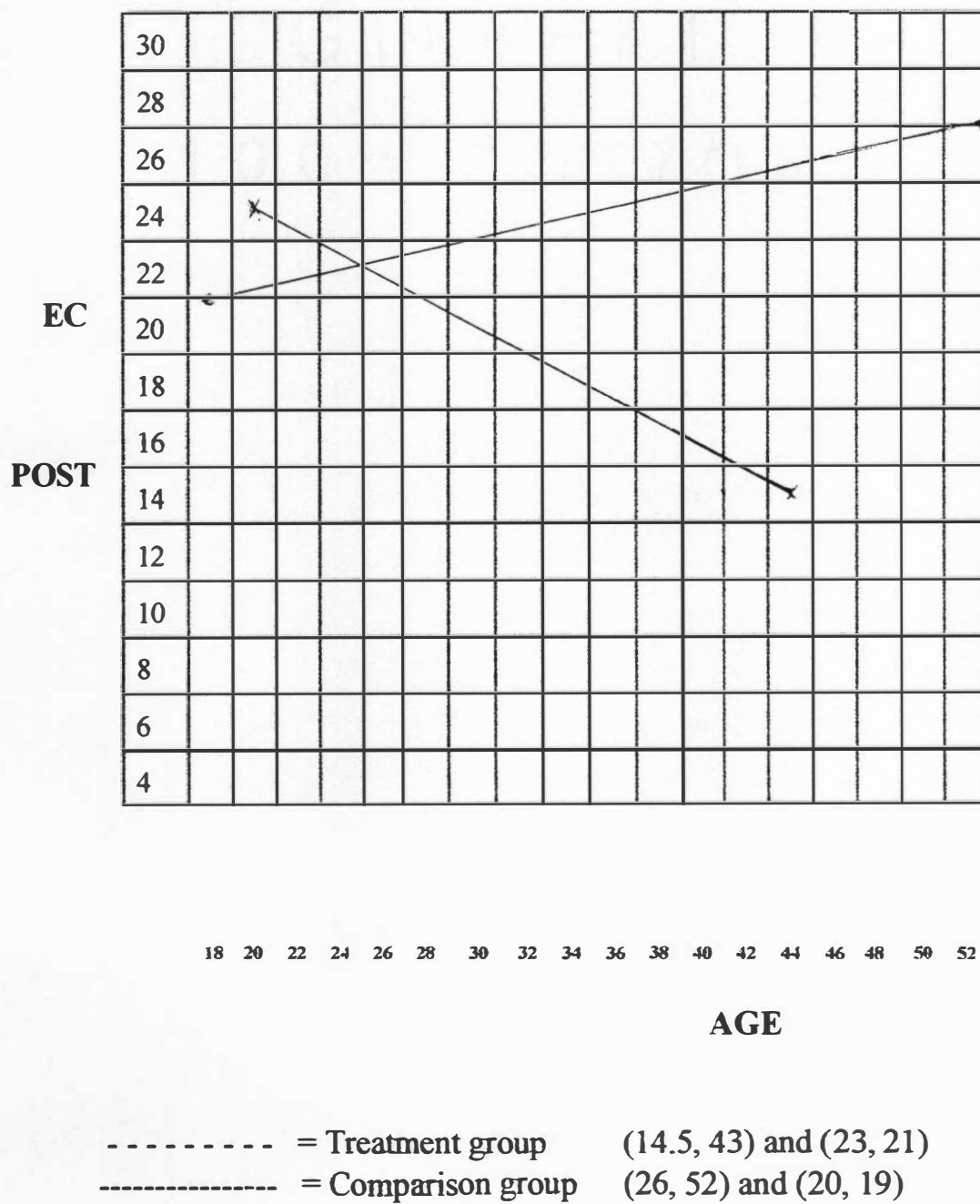


Figure 36. PREDICTED ECpost: Tx and COMPARISON GROUPS

The case summaries show the ranking of the two oldest participants in their respective group (comparison or treatment) with the means of the each group in Figures 37 - 38.

- 1.) with all cases included for interaction of group & age, $t = 2.961$,
 $p = .007$ (2 tailed);
- (2.) with 52 year old deleted from the analysis, $t = 1.986$, $p = .061$
(2 tailed);
- (3.) with the 43 year old deleted from the analysis, $t = 1.180$, $p = .252$;
- (4.) deleting both of the oldest participants from the analysis, $t = 1.211$, $p = .241$.

Figures 39-42 provide the coefficient tables for each analysis.

Summary

Note in Table 11 that when the 52 year old's score is removed, with alpha set at .10, the interaction term remains significant, but when the 43 year old's score is deleted, the significance of the interaction is gone. (The distribution of age with and without the oldest is depicted in Figure 43). Therefore, it appears that these two observations are influential and determine the significant interaction. The validity of these observations is,

Case Summaries ^a

		EC posttotal	Age
1		13	20
2		13	20
3		14	21
4		19	24
5		19	21
6		19	19
7		19	21
8		20	24
9		21	28
10		21	27
11		22	19
12		22	23
13		26	22
14		26	52
15		28	19
16		28	29
Total	N	16	16
	Mean	20.63	24.31
	Std. Deviation	4.77	8.05
	Range	15	33
	Minimum	13	19
	Maximum	28	52
	Variance	22.783	64.763
	Skewness	-.054	3.021

a. Limited to first 100 cases.

Figure 37. CASE SUMMARIES. Comparison Group: ECpost and Age

Case Summaries ^a

		EC posttotal	Age
1		8	43
2		17	21
3		18	25
4		18	22
5		18	28
6		21	26
7		22	21
8		22	21
9		22	25
10		25	22
11		26	21
12		27	27
13		27	26
14		28	21
Total	N	14	14
	Mean	21.36	24.93
	Std. Deviation	5.37	5.80
	Range	20	22
	Minimum	8	21
	Maximum	28	43
	Variance	28.863	33.610
	Skewness	-1.029	2.574

a. Limited to first 100 cases.

Figure 38. CASE SUMMARIES. Treatment Group: ECpost and Age

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.240	3.540		1.480	.151
	EC pretotal	.700	.186	.707	3.756	.001
	FS pretotal	.136	.155	.130	.877	.389
	PD pretotal	-5.5E-02	.146	-.051	-.379	.708
	PT pretotal	-3.3E-02	.168	-.034	-.195	.847
2	(Constant)	4.029	4.639		.869	.394
	EC pretotal	.647	.199	.654	3.248	.004
	FS pretotal	.251	.198	.241	1.270	.218
	PD pretotal	-6.8E-02	.153	-.062	-.441	.663
	PT pretotal	-.106	.184	-.110	-.573	.573
	Age	1.7E-02	.104	.023	.162	.873
	Gender	2.252	1.748	.184	1.289	.211
	Tx (0) Control (1)	-1.212	1.700	-.123	-.713	.483
3	(Constant)	16.112	5.705		2.824	.010
	EC pretotal	.545	.175	.550	3.116	.005
	FS pretotal	.121	.175	.117	.692	.496
	PD pretotal	3.4E-03	.134	.003	.025	.980
	PT pretotal	4.2E-03	.163	.004	.026	.980
	Age	-.400	.167	-.559	-2.400	.026
	Gender	2.008	1.505	.164	1.334	.196
	Tx (0) Control (1)	-14.913	4.852	-1.518	-3.074	.006
	Interaction of Age & Group	.578	.195	1.580	2.961	.007

a. Dependent Variable: EC posttotal

Figure 39. COEFFICIENTS. N = 30, Includes all cases.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.512	3.469		1.589	.125
	EC pretotal	.763	.187	.785	4.071	.000
	FS pretotal	7.0E-02	.158	.067	.444	.661
	PD pretotal	-2.9E-02	.144	-.027	-.202	.842
	PT pretotal	-7.9E-02	.168	-.083	-.470	.642
2	(Constant)	11.634	5.760		2.020	.056
	EC pretotal	.687	.188	.707	3.660	.001
	FS pretotal	8.7E-02	.202	.083	.430	.671
	PD pretotal	-7.2E-02	.144	-.067	-.498	.624
	PT pretotal	-7.5E-02	.173	-.079	-.430	.671
	Age	-.228	.156	-.218	-1.463	.158
	Gender	1.934	1.646	.160	1.175	.253
	Tx (0)					
	Control (1)	-1.253	1.593	-.128	-.786	.440
3	(Constant)	16.022	5.830		2.748	.012
	EC pretotal	.513	.197	.528	2.609	.017
	FS pretotal	.148	.192	.141	.771	.450
	PD pretotal	1.8E-02	.142	.017	.126	.901
	PT pretotal	1.5E-02	.169	.016	.090	.929
	Age	-.402	.170	-.384	-2.363	.028
	Gender	2.060	1.542	.171	1.336	.197
	Tx (0)					
	Control (1)	-17.465	8.300	-1.783	-2.104	.048
	Interaction of Age & Group	.686	.346	1.607	1.986	.061

a. Dependent Variable: EC posttotal**Figure 40. COEFFICIENTS. N = 29. Leaving out 52 year old.**

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.508	3.542		2.120	.045
	EC pretotal	.580	.187	.637	3.108	.005
	FS pretotal	3.2E-02	.156	.032	.203	.841
	PD pretotal	-8.5E-03	.140	-.009	-.060	.952
	PT pretotal	7.5E-02	.168	.090	.447	.659
2	(Constant)	3.388	4.110		.824	.419
	EC pretotal	.517	.183	.568	2.828	.010
	FS pretotal	.130	.180	.131	.721	.479
	PD pretotal	3.9E-02	.141	.041	.275	.786
	PT pretotal	-2.6E-02	.166	-.031	-.157	.877
	Age	.156	.106	.218	1.480	.154
	Gender	2.434	1.547	.227	1.573	.131
	Tx (0)					
	Control (1)	-1.502	1.507	-.172	-.997	.330
3	(Constant)	12.941	9.065		1.428	.169
	EC pretotal	.529	.181	.581	2.915	.009
	FS pretotal	.115	.179	.116	.643	.528
	PD pretotal	1.9E-02	.141	.020	.138	.892
	PT pretotal	2.2E-03	.166	.003	.013	.989
	Age	-.254	.363	-.353	-.699	.493
	Gender	2.125	1.555	.198	1.366	.187
	Tx (0)					
	Control (1)	-11.638	8.722	-1.333	-1.334	.197
	Interaction of Age & Group	.436	.370	1.346	1.180	.252

a. Dependent Variable: EC posttotal

Figure 41. COEFFICIENTS. N = 29. Leaving out 43 year old.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.775	3.449		2.254	.034
	EC pretotal	.643	.186	.720	3.457	.002
	FS pretotal	3.4E-02	.157	-.034	-.214	.832
	PD pretotal	1.8E-02	.138	.019	.128	.899
	PT pretotal	2.9E-02	.167	.035	.176	.862
2	(Constant)	4.816	7.023		.686	.501
	EC pretotal	.538	.204	.603	2.634	.016
	FS pretotal	.113	.196	.113	.579	.569
	PD pretotal	2.7E-02	.152	.029	.178	.861
	PT pretotal	2.9E-02	.170	-.035	-.170	.867
	Age	9.8E-02	.254	.067	.385	.704
	Gender	2.358	1.611	.223	1.464	.159
	Tx (0)					
	Control (1)	-1.479	1.545	-.170	-.958	.350
3	(Constant)	12.380	9.339		1.326	.201
	EC pretotal	.489	.206	.548	2.374	.028
	FS pretotal	.146	.196	.146	.746	.465
	PD pretotal	3.9E-02	.151	.042	.259	.798
	PT pretotal	1.5E-02	.172	.018	.088	.931
	Age	-.235	.373	-.161	-.632	.535
	Gender	2.204	1.598	.209	1.380	.184
	Tx (0)					
	Control (1)	-14.214	10.626	-1.637	-1.338	.197
	Interaction of Age & Group	.545	.450	1.440	1.211	.241

a. Dependent Variable: EC posttotal

Figure 42 . N = 28. Leaving out two oldest , 43 and 52 year olds.

TABLE 11.

**Coefficients of Interaction of Age and Group,
(Controlling for Age, Gender, Group, and 4 Covariates)**

	t	sig.
N = 30, All cases included.	2.961	0
N = 29, Leaving out the 52 year old	1.986	0.06
N = 29, Leaving out the 43 year old	1.18	0.252
N = 28, Leaving out both 52 and 43 year olds	1.211	0.241

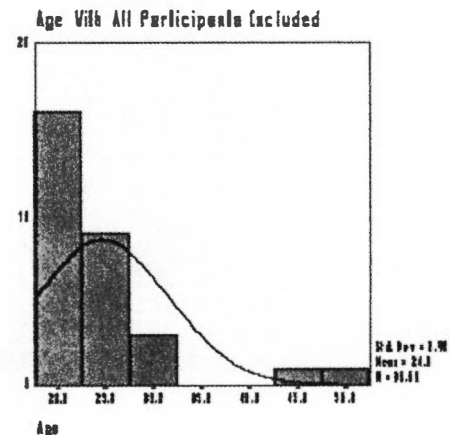
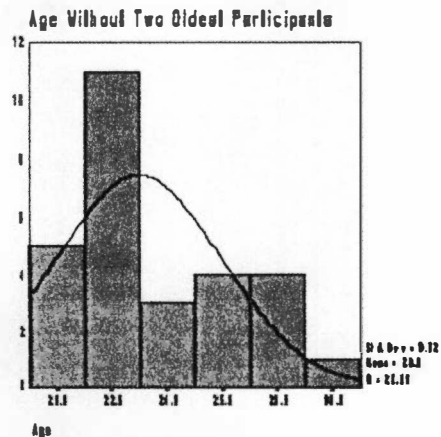


Figure 43. Histograms of Participants with and without 2 Oldest.

therefore, a critical issue that will be discussed in the next chapter.

Using the followup data, a regression analysis (see Figure 44) was repeated to check for the interaction. The interaction disappears at followup ($t = -.809, p = .428$).

In summary, hypothesis 1 stated that at pretest, females would score higher than males on the EC and PT subscales of the IRI. The difference in this study was not found significant; therefore, hypothesis 1 was not supported. Hypothesis 2 stated that there would be an EC and PT posttest difference between the experimental and comparison groups when controlling for prescores and gender. No significant differences were found at posttest; however, results at followup showed significant differences. Hypothesis 2 was supported at followup with a significant difference on EC scores between groups.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.196	3.002		3.396	.002
	EC pretotal	.362	.158	.458	2.294	.030
	FS pretotal	.133	.131	.160	1.012	.321
	PD pretotal	-.118	.124	-.136	-.955	.349
	PT pretotal	.165	.143	.215	1.156	.258
2	(Constant)	7.399	3.701		1.999	.058
	EC pretotal	.315	.159	.398	1.981	.060
	FS pretotal	.328	.158	.394	2.083	.049
	PD pretotal	-.096	.122	-.110	-.781	.443
	PT pretotal	.050	.147	.065	.341	.737
	Age	.083	.083	.145	1.002	.327
	Gender	1.499	1.395	.153	1.075	.294
	Tx (0) Control (1)	-2.449	1.356	-.312	-1.806	.085
3	(Constant)	5.854	4.192		1.396	.177
	EC pretotal	.311	.160	.392	1.937	.066
	FS pretotal	.320	.159	.384	2.008	.058
	PD pretotal	-.085	.124	-.098	-.683	.502
	PT pretotal	.074	.151	.097	.492	.628
	Age	.084	.084	.147	1.008	.325
	Gender	2.883	2.214	.294	1.302	.207
	Tx (0) Control (1)	-.509	2.761	-.065	-.184	.855
	Interaction-gender & group	-2.296	2.840	-.287	-.809	.428

a. Dependent Variable: ECfollowup**Figure 44. COEFFICIENTS. Checking for Interaction. Follow-up data.**

CHAPTER V

DISCUSSION

The purpose of this study was to do a formative evaluation of an affective empathy training model for teaching affective empathy skills to young adults. The primary question addressed in this study was: can affective empathy be taught in a short term model? Hypothesis 1 was that at pretest, females would score higher than males on the EC and PT subscales of the IRI. Hypothesis 2 stated that there would be an EC and PT posttest difference between the experimental and comparison groups when controlling for prescores and gender. Another important question in this study was: does gender moderate ability to learn empathy?

Included in this chapter are findings from the Results Chapter as they relate to the research questions in this study. Threats to validity, limitations of the study, and implications for future research are also addressed.

Results

The result of testing hypotheses 1 suggested that there was no difference by gender at pretest. The results of testing hypothesis 2 with alpha set at .10 at posttest suggested that there was no difference between groups. Whether empathy can be taught in one day based on the results of the posttest scores is

unknown. There are a number of limitations in this study which suggest there may be a high probability of a Type II error and, therefore, caution is recommended before concluding that empathy cannot be taught. Several problems discussed in following sections may have contributed to the failure to find significant differences between groups' posttest scores.

Followup analyses showed different results. There appeared to be a significant difference between the two groups at followup, with the treatment group showing higher levels of affective empathy than the comparison group. These results suggested the group intervention may have caused an increase in EC scores at followup. This suggests that the activities in the treatment group, particularly the role play activities, may initiate a change process in affective empathy. It is conceivable that after a six weeks period, a person has had a chance to practice empathy in a different way and can use this "new past experience" to evaluate his/her empathy. This is a plausible explanation for not finding change at posttest. The training may have provided new skills, but some life experience to practice the newly learned change, to re-interpret experiences, may be needed before reporting change.

For the research question that focused on differential effects by gender, it is difficult to come to any firm conclusion. The results generally replicate the

same trends found in the literature of no difference in the abilities of males and females to learn empathy skills.

Post Hoc Analyses

Results of the post hoc analyses provided evidence of a possible interaction between age and treatment. The results of analyses of posttest data suggested the possibility that the cognitive empathy training (comparison group) worked better for older people, and that affective empathy training worked better with younger people. However, the one or two influential cases discussed earlier clearly suggested these results may have been an artifact associated with these two cases.

At followup, the interaction failed to achieve statistical significance. This outcome makes it even more plausible that the significant interaction at posttest was a result of two unusual observations. However, the results at posttest do have some heuristic value. The results suggest that future research should specifically address the possible moderating role of age. Clearly, the developmental literature suggests this is true for children and adolescents, and results of this study raise questions about the effect of adult developmental level on the ability to learn empathy skills and the techniques required to do it.

Threats To Statistical Conclusion Validity

Limitations of the Research Methods: Sample Size and Statistical Power

The sample size did not meet the projected calculations for sufficient power to detect a difference in groups. The initial power calculation indicated a sample size of ~60 was needed. The sample consisted of 30.

Low Statistical Power

Since the basic conclusion was that the treatment variable did not cause a change in the reported levels of empathy at posttest, an analysis of statistical power was needed. In other words, with the data from **posttest** collection, how much power was available to detect a difference if one was there?

Because there was such a small sample size, a retrospective power analysis was conducted to “illustrate the magnitude of the effect that could have been detected given the sample size, the variance obtained in the study, and the chosen α level” (Cook and Campbell, p. 41). With alpha set at .10 there was only a 17% probability of detecting a significant difference of about 1.2 IRI units between groups on EC at posttest. Similarly, there was only a probability of about 13 % of detecting a significant difference of about 1 IRI unit between groups on PT at posttest. Thus, the actual power of the tests of both main effect hypotheses was extremely low. All of the above information on statistical power

suggests that the likelihood of a Type II error in this research at posttest was high.

Violation of Assumptions of Statistical Tests

The particular assumptions of multiple regression include (1) normality, (2) independence of observations, (3) homogeneity of variance, and (4) linearity. Plots were checked with each regression analysis to check for normality, homogeneity of variance, and linearity. Independence was assumed in the design of the study. Results of all tests were consistent with these assumptions. Additionally, there is the ANCOVA assumption of homogeneous regression within treatment groups: “the regression of the posttest on the first-order covariates should be homogeneous and the groups being compared should be equivalent” (Cook and Campbell, p. 42). Tests of this assumption were consistent with homogeneity of regression within groups.

Random Irrelevancies in the Experimental Setting

Random irrelevancies in the setting can inflate error variance which affects scores on the dependent variable. Two possible random irrelevancies were observed on the day of training. There were last minute changes in room assignments which may have affected students and facilitators in unknown ways. In order to accommodate the needs of some students at the time of the

initial prescore data collection, a large group of students were asked to move temporarily to a room at the other end of the building; they were brought back approximately 20 minutes later to join the whole group. Whether this inconvenience affected this subgroup of students in any way is unknown.

It was noted by this researcher that in at least one of the treatment small groups, participants appeared to be rushing to fill out the posttest instrument before they left for the day. It was a sunny, warm Saturday and they had spent it inside participating in this research training. It is conceivable that they were interested in getting out quickly and, therefore, in their haste, responded to some IRI items erroneously.

The Reliability of Treatment Implementation.

Variation in the facilitators themselves can affect the way the protocols were implemented. The lack of standardization between facilitators can inflate error variance and decrease chances of finding true differences between groups. The ability and effectiveness of facilitators may have been different due to a variety of reasons.

The training of facilitators may have been unequal. One facilitator received less training and also separate training from the others; whether or not this affected the way the treatment was delivered is unclear. Additionally, two

facilitators had doctoral degrees while the others had Master's degrees. Their ages ranged from 35-51 and all were female. The comparison group facilitator was also a college professor; therefore, she may have been more comfortable and at ease with a college population. It is unknown if this difference had any effect on participants. The three treatment groups varied in the length of time they operated by one half hour. Since there was no standardized measure of treatment reliability for facilitator fidelity in the administration of treatment protocols, it is unknown what individual differences existed in quality of small treatment group activities.

Attempts at standardizing treatment protocols were made. There were some qualitative data which support a view of equal implementation. All facilitators were given the same written training packet; all have mental health licenses in the state of TN and are accustomed to facilitating group process. All facilitators turned in the role play form, indicating who had participated and how many role plays each person did. Therefore, there is some evidence that protocols were followed reliably. During the debriefing with facilitators, no one reported any significant deviations from the protocols.

Limitations of the Research Methods: Integrity of the Treatment

Findings in this study are somewhat different from other studies that have found empathy training effective. There are several possible reasons why results of this study conflict with results of others. One possible explanation is the length of the training. Although this study was testing a short term mode, it may be that 4-5 hours of treatment is of insufficient strength to facilitate any significant treatment effects at posttest. Short term is a relative term and 4-5 hours may simply be too short. Some studies have reported success with similar procedures, including role plays but more time was invested (Beechem and Comstock, 1997).

Another possible explanation for the failure to detect significant differences at posttest is that students may not have understood the Anchored Feelings exercise. One facilitator reported that at least one student had trouble with the exercise; other students may have experienced similar difficulty without reporting it or without the facilitator detecting it. Since this activity was an integral part of the affective empathy role plays and role reversals, an inadequate understanding could have affected the outcome.

The final explanation may be that the treatment was simply ineffective in producing immediate change of the magnitude that could be detected on the IRI.

Threats to Internal Validity

Many threats to internal validity can be ruled out because of random assignment, i.e. the groups were initially statistically equivalent at pretest and should remain so through time. There are some threats, however, for which random assignment does not control.

“When respondents are randomly assigned to treatment groups, each group is similarly constituted on the average (no selection, maturation, or selection maturation problems). Each experiences the same testing conditions and research instrument problems (no testing instrumentation problems). No deliberate selection is made of high and low scorers on any tests except under conditions where respondents are first matched according to, say, pretest scores and are then randomly assigned to treatment conditions (no statistical regression problem). Each group experiences the same global pattern of history (no history problem). And if there are treatment related differences in who drops out of the experiment, this is interpretable as a consequence of the treatment. Thus, randomization takes care of many threats to internal validity.” (Cook and Campbell, p. 56).

Conveniently, randomization rules out many threats to internal validity with the exception of imitation of treatments, compensatory equalization, compensatory rivalry, and demoralization in groups getting a lesser treatment. These can threaten internal validity even when randomization has been used successfully and can result in spurious differences. (Cook and Campbell, p.50). Procedures were used as an attempt to avoid these problems. Controls were put

in place so that during the day of training, groups did not overlap. Specifically, bathroom breaks, time and place for lunch were all scheduled so that students would not accidentally run into each other and talk about what they were doing in their respective groups. They were even instructed to avoid speaking to others in the event someone was in the bathroom at the same time they were.

It is unlikely that social competition existed because there was no announcement of what the difference in groups was. Additionally, there is no evidence that the two groups were different enough for a person to feel slighted; both were attempts at increasing some aspect of empathy skill. The comparison group was a credible alternate empathy training approach rather than a no treatment group. Each group member would likely feel that he/she had experienced a reasonable approach to teaching empathy. They were unaware of the difference between cognitive and affective empathy and unless they subsequently studied the nuances of empathy, it is unlikely they knew the difference or concluded that one is considerably more desirable than the other.

Limitations of Research Methods: Construct Validity

No data were collected to specifically evaluate the construct validity of the two treatment approaches. Even though the Empathic Concern scores were significantly different in the treatment group at follow-up as hypothesized, we

do not know if affective empathy was actually taught. The smaller group interaction of the affective empathy groups may have facilitated change in affective empathy rather than the activities themselves.

Instrumentation

It may be possible that the IRI is not set up to detect immediate change. The wording of the questions of the IRI create a sense of evaluating empathy skills by considering past experiences over a period of time. Words like “usually, often, sometimes” evoke a general evaluation of how the person has reacted in the past. Hence, the IRI may not be sensitive enough to pick up immediate changes. A person filling out the IRI at the beginning of the day has the same “past experiences” upon which to self-evaluate empathy as he/she does at the end of that day and, therefore, may not note any change in empathy from one day of training even though their empathy skills have actually increased.

Differential Mortality

Differential mortality can be a threat to internal validity in randomized studies. Followup data were missing for two students in the comparison group even after many attempts at obtaining the data. Illness was reported as the reason for not responding. This has the “undesirable side effect of obscuring the interpretation of results” (Cook & Campbell, p. 57).

Losing two cases in the control group may have had the effect of decreasing the equality of the groups on average (obtained through randomization) An additional effect is the inability to reliably predict the direction of the change in group mean. Mean substitution is an acceptable way of dealing with missing data for up to 10% of cases: 6.7% was missing in this study. Mean substitution was used in an attempt at maintaining group comparability.

“When all of the internal validity threats can be plausibly eliminated, it is possible to make confident conclusions about whether a relationship is probably causal. When all of them cannot, perhaps because the appropriate data are not available or because the data indicate that a particular threat may indeed have operated, then the investigator has to conclude that a demonstrated relationship between two variables may or may not be causal” (Cook & Campbell, p. 55-56).

While differential mortality was a potential threat because of the possibility that these two scores may have really influenced the group, mean substitution was used as a method for making the data reasonable representative. Also, a check of the prescores and postscores of these two cases indicated that one fell within one standard deviation and the second fell within the second standard deviation on pretests and posttests in their respective group. Therefore, neither appeared to indicate a pattern of extreme scores. The threat of differential mortality appears to have been addressed.

Threats to External Validity

Sample

Since the sample in this study was essentially a convenience sample, the generalizability is very limited. All findings are limited to English speaking students at UTK, primarily in the training stage of a human services career who are mostly in their early 20's.

Random Heterogeneity of Respondents

Some students can be more affected by experiments than others; student attributes can interact with the treatment. This is a threat to external validity. There is the possibility that the one case in the treatment group which appeared to be an influential observation was not representative of her age group, an individual difference which caused an interaction effect. There is some qualitative data to suggest this interpretation. For instance, the facilitators who worked with this individual stated that she tended to monopolize the group and needed an unusual amount of attention. She came down to the debriefing room at the end of the day, spoke to all of the facilitators, and spontaneously announced that she had not increased her empathy skills. Also, since she did not like pizza, she left the building for lunch. No other student did this.

Limitations of the Research Methods: Heterogeneity

The total EC score can range from 0 to 28 with higher scores indicating greater “affective empathy,” the variable more predictive of altruistic responses. In this study, total EC postscores ranged from 8 - 28 with a mean of 20.97; when the one influential observation was removed, however, the range decreased to 13-28. The scores were clumped primarily towards the higher end of the scale. Whether this is representative of the college population in general cannot be ascertained from this study.

In order to increase external validity, it would be wise in the future to deliberately sample for heterogeneity (Cook & Campbell, p. 75). The variance in scores would likely have been increased if accountants, engineers, and math majors were included in the study because, at least on the face of it, people in these professions would seem to be less likely to possess high levels of empathy.

Limitations of Research Methods: Bias in Gender Differences

Davis found significant gender differences in empathy in large college samples with females scoring higher than males. He found this on all four subscales of the IRI. There were differences in this study also, albeit they did not reach statistical significance. One subscale finding, however, was the opposite of what Davis found. Davis found the greatest difference in gender

was with the FS scale with females scoring significantly higher than males (See Chapter III). There were too few males in the sample to make conclusions. Since only 20% of the sample was male, attempts should be made to recruit more males in order to reliably test the differences in gender.

Conclusions And Implications

Future research needs to be done which addresses the limitations in this study. Sample size, more heterogeneous sample, standardization of facilitator administration of treatment, clarity of instructions, and further followup data collections all need attention.

Sample size was a major problem in this study. Small sample size affected the power to detect differences in the groups. Ideally, a second training should have been done in order to address this limitation. In the future, it will be important to repeat the power analysis prior to training and if insufficient subjects show up, it might be prudent to delay training until a sufficient sample size is available.

If regression analysis is used in future studies, researchers should obtain larger and more heterogeneous samples in order to broaden the range of responses. An increase in heterogeneity of the sample in the future would allow for increased external validity. The students in this sample scored generally high

on empathy to begin with.

The interaction of age and group at posttest is of heuristic value. Future studies can check for the possibility of age as a moderating variable of treatment. Specifically, a check for interaction between age and treatment should be ruled out before interpreting main effects.

Checks for standardization of treatment delivery in the future is important. Increased training for facilitators might insure treatment fidelity. Also, gathering more qualitative data might assure fidelity of treatment implementation and increase internal validity.

Additionally, setting up the training day such that people do not rush when they are filling out the post test would possibly allow for increased reliability in scores. Ensuring that each participant fully understands the directions for the Anchored Feelings assignment would also be helpful.

Problems with Recruitment and Suggestions for the Future

Recruiting students for this study posed unforeseen problems for the researcher. When requesting permission to recruit students from classes, the variance in responses from faculty on campus was great. For example, the range of responses was from “Sure... how much time do you think you’ll need” to “Well, you can have one minute to introduce yourself and they can call you if

they want to know more.” Additionally, after scheduling a date to attend a class, there was great variety in when I was allowed to speak. Again there was a wide range of treatment, from “Come on in, Bev, and I’ll introduce you” to waiting for half an hour before being acknowledged as an item on the agenda. In summary, the support for students doing research varied greatly by college and professor. The Nursing School and Educational Psychology Departments were the least amenable to my requests, while Psychology and Social Work were very supportive. All social work faculty were accommodating.

During the recruitment process, students often showed interest in the empathy training as an opportunity for personal gain. On the actual day of training, however, the weather was beautiful (sunny and warm for a fall day). Even though planning the date for training included a conscious awareness of avoiding a UT ball game day, the fact remains that students were asked to give up a whole Saturday. This may have been more of a sacrifice that most were willing to make. One hundred eighty students signed up but only 17% showed up.

It would be extremely helpful in recruiting students if they were to gain something more tangible than personal growth. For instance, if the College of Social Work were to implement a policy whereby faculty members could

reward social work students for participating in research, the recruitment process would likely be much easier. If doctoral students are ever to be successful at experimental research with students, this is a very important issue.

Another possible approach to recruitment would be to pay students for their participation. Unfortunately, this student did not possess the finances to make this feasible.

Specific Procedures or Problems Identified at Data Collection

Hindsight provides opportunity to make suggestions in the event the same research is repeated. Several problems were identified which could be changed in the future. For instance, it would be helpful to number the IRI's along with the information sheets, so that numbers don't have to be added by the data entry people and then matched later by name for the demographic information.

Although providing food for students did achieve the goal of keeping all of the students during the day long training, one student complained of the menu. Therefore, in the future it would be prudent to allow for some diversity of the menu. Luckily, the student returned after she left to get lunch.

Henson Hall poses handicap accessibility problems which almost closed down the training at the last minute. Henson Hall should not be used for research in the future if students are involved in a data collection process.

In the experimental subgroups, there was some difficulty doing the role reversals. Extra time may be needed to coach students in this process. The anchor experience exercise was difficult for some students. It would be helpful to provide more concrete examples of anchored experiences and discussing them before asking students to fill out the form.

Additionally, a debriefing location for facilitators should have been announced prior to debriefing so that everyone knew where to meet. The debriefing was felt to be very useful for both the facilitators and the researcher.

Suggestions for Improving the Model

If the model remains a one day training approach, then attention should be given to changing the measurement instrument or changing the expectation of detecting a change in empathy at the end of the day, at postscore. From this study, there are compelling reasons not to expect much change at posttest, but the evidence at followup gives reason to continue to develop the model. It is likely that the four to five hour model “kick-starts” a process of change, i.e., a seed is sown which increases empathy development at a faster rate for people who go through the affective training.

If the IRI is used in the future with the model, it may be best to use it as a follow up instrument, perhaps at six weeks and twelve weeks after training.

In this way, empathy skill changes that become apparent can then be detected.

Another possibility is to strengthen the model by increasing the role play activities, perhaps running the training over a two day period, “a weekend of empathy training” and then instituting “booster sessions” over time which would reinforce the initial learning. Maximizing the experience of affectively “being in the shoes” of another would be valuable. This model would likely be useful as an adjunct to marital therapy, marital enrichment, or perpetrator programs.

Summary

Some of the primary methodological limitations in the existing literature were addressed in this study, specifically construct definition and measurement; however, the sample size and sample bias are important deficiencies and should be addressed in future research.

“In applied research...decisions have to be based on imperfect knowledge which only suggests that a treatment has had no detectable effect. By what standards should one estimate the confidence that can be placed in ‘accepting’ the null hypothesis, particularly if a decision has to be based on the results of a single experiment” (Cook and Campbell, p. 45).

In building the training model, valuable information was obtained in this study which should be further tested.

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APPENDICES

APPENDICES

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Appendix A

EMPATHY TRAINING

Consent Form

Introduction: You are volunteering to participate in a research study on empathy training for adults. You will be assigned into a group and will spend the day from 9am to 4pm learning about empathy by watching a video and role playing. You will be asked to fill out a pretest in the morning and a posttest after the training in the afternoon. You will be asked to provide the name and telephone number of a contact person in case you cannot be reached for the follow up measure. One month later you will be contacted to fill out the form once more for follow-up data. The research investigator is Beverly McKee, LCSW (licensed clinical social worker), who is a Ph.D. student in the College of Social Work at the University of Tennessee, Knoxville.

Benefits: There is a possibility that you could increase your empathic skills by participating in this research. Also, by your participation you will be contributing to knowledge gained from this study which will be used to further develop the model into a short-term training. The model should help people understand each other better and, therefore, get along better. Free pizza will be provided at lunch from 12:00 to 12:30.

Risks and protections:

There is only one potential risk to you as a result of your participation in the research: the possibility of your participation in the research and your responses on research forms becoming known to other people. There are procedures in this research to protect you from this risk.

Your confidentiality in this research will be protected. All **personal information and data** from the measurement instrument will receive a random identification number after the one month follow-up data are collected. At that time all names and identifying information will be deleted from research forms. Until that time, all information will be stored in a locked file cabinet in a locked room in Henson Hall on the UT campus under the supervision of the researcher, Beverly McKee. All subsequent use of the data will be in **aggregate statistical form which makes recognition of subjects impossible**. The information you supply is strictly for research purposes and no one besides the researcher will have access to the data. You can be made aware of your results if you wish.

Your participation is voluntary: Your participation is completely voluntary. You may withdraw from participation at any point in the training with no penalty. If during the course of the research you have further questions about the study, you can contact Beverly McKee at (423) 584-0171 in Knoxville. Her office mailing address is The Northshore Group, 1111 Northshore Drive, Suite S-490, Knoxville, TN 37919-4054.

I have read and understood the statements above, and do agree to participate in the Empathy Training. I acknowledge that my participation is completely voluntary.

STUDENT'S NAME (printed) _____

STUDENT'S SIGNATURE _____ **Date** _____

Appendix B

INFORMATION SHEET

NO. _____

NAME: _____

AGE: _____

MALE / FEMALE(circle one)

YOUR COLLEGE MAJOR: _____

As part of your participation in this research, you will be asked to complete a research form twice today and once again in a month by mail. In order to get the research form to you a month from now, the researcher needs to be able to contact you, so please write your address and phone number below. Also, provide the name and phone number of a person who the researcher can use to contact you if need be. If you can't respond my mail, the researcher will call and ask you the questions over the phone.

Thanks for your participation.

Your Address: _____

Your Phone Number: _____

Name of a contact person who will know how to find you: _____

Phone number of your contact person: _____

Appendix C

Name _____ Age _____ Male Female (circle one)

INTERPERSONAL REACTIVITY INDEX

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page : 0, 1, 2, 3, or 4. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly as you can. Thank you.

ANSWER SCALE:

0	1	2	3	4
Does not describe me well				Describes me well

- ____ 1. I daydream and fantasize, with some regularity, about things that might happen to me.
- ____ 2. I often have tender, concerned feelings for people less fortunate than me.
- ____ 3. I sometimes find it difficult to see things from the "other guy's" point of view.
- ____ 4. Sometimes I don't feel very sorry for other people when they are having problems.
- ____ 5. I really get involved with the feelings of the characters in a novel.
- ____ 6. In emergency situations, I feel apprehensive and ill-at-ease.
- ____ 7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it .
- ____ 8. I try to look at everybody's side of a disagreement before I make a decision.
- ____ 9. When I see someone being taken advantage of, I feel kind of protective towards them.
- ____ 10. I sometimes feel helpless when I am in the middle of a very emotional situation
- ____ 11. I sometimes try to understand my friends better by imagining how things look from their perspective.

- ___ 12. Becoming extremely involved in a good book or movie is somewhat rare for me.
- ___ 13. When I see someone get hurt, I tend to remain calm .
- ___ 14. Other people's misfortunes do not usually disturb me a great deal.
- ___ 15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
- ___ 16. After seeing a play or movie, I have felt as though I were one of the characters.
- ___ 17. Being in a tense emotional situation scares me.
- ___ 18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
- ___ 19. I am usually pretty effective in dealing with emergencies.
- ___ 20. I am often quite touched by things that I see happen.
- ___ 21. I believe that there are two sides to every question and try to look at them both.
- ___ 22. I would describe myself as a pretty soft-hearted person.
- ___ 23. When I watch a good movie, I can very easily put myself in the place of a leading character.
- ___ 24. I tend to lose control during emergencies.
- ___ 25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
- ___ 26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
- ___ 27. When I see someone who badly needs help in an emergency, I go to pieces.
- ___ 28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Appendix D**LIST OF FACILITATORS FOR EMPATHY TRAINING**

<u>Name</u>	<u>Licensures in Tennessee</u>	<u>Field of Practice</u> <u>& National Licenses</u>
1.Carolyn Patton, Ed.D.	LMFT, LPC, CEAP	Marriage & Family Therapy
2.Celia Ferguson, Ph.D.	LMFT	Marriage & Family Therapy
3.Patti Dalton, M.S.S.W.	LCSW, ACSW	Clinical Social Work
4.Regi Roberts, M.S.S.W.	LCSW, LAODAC, MAC, CEAP	Clinical Social Work
5.Amanda Smartt, M.S.S.W.	LCSW, ACSW	Clinical Social Work
6.Nan Krichinsky, M.S.S.W.	LCSW	Clinical Social Work
7.Karen Hoffman, M.S.S.W.	LCSW, ACSW, CEAP	Clinical Social Work
<u>Backup facilitators:</u>		
8.Donna Johnson, M.S.S.W.	LCSW, ACSW, BCD, ATR	Clinical Social Work and Art Therapy
9.Lisa Burrell, M.S.S.W.	LCSW, CEAP	Clinical Social Work
10.Kathy Williams, M.S.S.W	LCSW	Clinical Social Work
11.Barbara Godfrey, M.A., M.S.S.W.	LPE, LCSW	Clinical Social Work

Appendix E

TRAINING PACKET

Empathy Training

Appendix E: Training Packet

FACILITATOR PACKETS

- 1. FACILITATOR AGREEMENT**
- 2. 9AM FACILITATOR JOBS**
- 3. FACILITATOR ROOM ASSIGNMENTS**
- 4. CHARACTERS IN “HIGHER LEARNING”**
- 5. “HIGHER LEARNING” SCENES**
- 6. EMPATHY TRAINING “A” OR “B” PROTOCOLS**
- 7. STUDENT FLOW CHART**
- 8. CONSENT FORM**
- 9. INFORMATION SHEET**
- 10. IRI**
- 11. NAME TAG**
- 12. Role Play Summary Form**
- 13. Recent Experiences**
- 14. Anchored Feelings**

Appendix E: Training Packet

FACILITATORS' AGREEMENT

Regarding the empathy training research which I have volunteered to participate in, I agree to fully abide by the rules of confidentiality. I will not divulge any information regarding students or their participation.

Printed Name

Signature

Date: _____

Witness: _____

Date: _____

Appendix E: Training packet

9 am Facilitator Jobs

1. Patti - Front door to Henson Hall, "greeter," send students to Room 209.

After 1st 60 students have arrived, switch to giving out handout for 2nd training day. Ask students to fill out SIGN UP sheet, fill out information form and IRI.

2. Nan - Room 209, hand out "consent form" and instruct students to give them to Mandy.
3. Mandy - collect consent forms and give out "information sheet and IRI."
4. Carolyn - Collect "information sheets and IRI's" and give to Karen, Regi, or Celia
5. Karen, Regi, & Celia - take "information sheets and IRI's" to 1st floor, Jim Post's office for data entry.

Appendix E: Training Packet**Facilitator Room Assignments for Empathy Training:**

<u>BASEMENT:</u>	<u>Room No.</u>	<u>Facilitator</u>
Conference Room	6	Carolyn Patton

1st FLOOR:

Children's Research Center Conference Room	130	Celia Ferguson
---	-----	-------------------

Grant Resource Room no number (next to conference room)		Amanda Smartt
--	--	------------------

2nd FLOOR:

Classroom	206	Nan Krichinsky
-----------	-----	----------------

Classroom	209	Regi Roberts
-----------	-----	--------------

3rd FLOOR:

Classroom	306	Patti Dalton
-----------	-----	--------------

Classroom	311	
OR		Karen Hoffman

Student Lounge	228	
(Karen, you can choose which of these you prefer.)		

RESTROOMS:

<u>Basement</u>	<u>1st floor</u>	<u>2nd floor</u>	<u>3rd floor</u>
Men 8 & "9"	Women 115*	Men 215*	Women 315*
Women "9"			

*large restrooms

"9"'s are not actually numbered; they're between 8 & 10

Appendix E: Training Packet

Characters in “Higher Learning” (generally in order of appearance in movie)

Kristen

Malek

Monet

Nicole & Claudia

Chad & Billy

Fudge

Bremmie

Taran

Wayne

Professor Phipps

David

Tasia

Scott

Appendix E: Training Packet

HIGHER LEARNING a film by John Singleton

Scene by scene:

Columbus University - rally, band, incoming freshman class

Elevator - Kristen (white girl) and Malek (black male) don't speak, but she protects her purse as if she's afraid he might attempt to take it. He shakes his head and rolls his eyes like he knows what she's thinking and he feels insulted.

Dorm rooms - setting up rooms

Track - Coach tell Malek to leave because of his cocky behavior. Malek acts entitled. Malek sees Tasia running.

Dorm room - Monet (black student) meets Kristen (white) in dorm room. Monet is amused by how naive Kristen appears to be; Kristen is from "Disneyland."

Kristen tells her two white girlfriends (Nicole and Claudia) that she can't afford to move into apt. with them because her Dad was laid off from McDonald Douglas.

Kristen and girls at fraternity party (all white)- meet Chad and boys

Party - Blacks party in apt. Fudge talking about white financial institutions controlling the world. White student comes in and asks that party end so he can be ready for class next day. Bremmie (nerd) gets security to break up the party.

Kristen walks home from party alone; Taran (junior) warns her it's not safe to walk alone, explains blue light system with phone at end of every block. Taran gives Kristen a flyer and asks her to attend meeting of Students for a Non Sexist Society.

Malek and Wayne meet when Wayne comes home at night at turns on loud music which wakes Malek up. Malek complains of Wayne's messiness on his side of the room.

Fudge describes groups on campus as: Disneyland, Chinatown, South of the Border, and the Black Hole. Monet says she's heard about him: he's been in college 6 years but hasn't graduated. He calls her "fresh fish" and she calls him "old trout." (All in fun.)

Political science class first meeting: Professor Maurice Phipps asks Malek to read list of students aloud and then says they must leave and straighten out their financial accounts with the university; Phipps preaches there's no handouts.

Kristen tells Prof. Phipps she needs his class for her major.

Malek tells Prof. Phipps he should help him out (implying because he's a brother).

Kristen and Malek are both in the finance office and are both told they have

outstanding accounts. Malek is told to talk to the athletic dept. Kristen is told to get a job.

Malek goes to the track coach and asks for a full scholarship; coach says only if he works hard and runs track

Fudge and friends go into Bremmie's apt. room and intimidate him. Next day Bremmie and his roommate move into the dorm. Bremmie behaves like a wimp, like he's afraid of everything.

Fudge taunts Malek (playing cards scene) about being a black man who is owned by the system, "run, nigger, run."

Kristen bleached her hair; friends says she looks like a whore behind her back. Bremmie is in the rec room and doesn't know how to play arcade game like Malek or play pool like Wayne and David. (Lacking in social skills!)

Drinking scene at bar; Kristen drinking shots; Billy takes Kristen to frat house. Kristen tells Billy to use condom, but he refuses and rapes her.

Kristen runs to her dorm room.

Bremmie asks Billy at frat house: "Did you give it to her?" Bremmie lacks any sensitivity to the situation.

Kristen is crying in dorm room when Monet comes in. Billy calls to speak to Kristen and when Monet says Kristen is not in, Billy gets mad and calls Monet a "Black bitch."

Monet and Kristen go to Fudge and his friends and tell them what happened; Guys go to frat house and beat up on Billy. Frat boys call security who break up fight.

Fudge feels security is unfair to the blacks, picks on them and lets the whites get away with stuff.

Kristen goes to meeting of Students for a nonsexist Society; Taran leads it.

Malek at Fudge's apt. on computer; borrows book on Frederick Douglass.

Bremmie on steps reading "Odyssey"; skin head Scott invites him out with the guys; Bremmie has not fit in anywhere until now.

Prof. Phipps Class - uses paper bag to wake up student who's asleep in class. Lectures on nobody will treat you special because of our race, etc.

Cops ask Fudge for I.D.; he asks them for same. Shows his contempt for police.

Kristen & Taran eating lunch by tree. Kristen has confided that she was raped; says I didn't ask for this." Taran is supportive and hugs her.

Malek is upset with Prof. Phipps for a C on his paper which has numerous misspellings. Prof. Confronts Malek Williams for referring to him as Uncle Tom.

Track & field games; runners get into fight.

Malek talks to Tasia, flirts, and walks her to her destination.

Skin heads & Bremmie; introducing hate ideas to Bremmie, i.e. "We're brothers

by blood: this is your family now. We take care of our own.”

Malek & Tasia in library; she’s helping with his writing.

Kristen & Taran in library; Kristen noticing Taran in sexual manner.

Kristen & Prof. Phipps in his office regarding her paper on objectivity.

Malek & Prof. Phipps regarding his paper, much better this time. Malek complaining about racism and how tough he has it.

Malek studying.

Bremmie - scene with calculator. Not doing well in math and watching the other students around him who happen to be minorities and who do well.

Kristen soliciting students for rally.

Wayne asked Kristen for flyer. Confronts her sexism.

Halloween party and rally outside with chant “no means no.”

Kristen speaks at rally & announces she was raped.

Skin heads beat up black guy with white girl; Bremmie watches.

Kristen asks Taran about staying night, i.e. sexual relationship, and Taran is sensitive, stating she wants Kristen to be sure that’s what she wants, not because she’s “fascinated” with the idea.

Monet tells Kristen that Taran is weird - doesn’t like idea of Taran with Kristen.

Malek & Tasia at track: Malek complaining about running, “being a slave,” stretching on field, and then bedroom scene.

Kristen going out with Wayne; Monet is relieved.

Bremmie and gun scene. Scott tell him not to point gun at him.

Kristen & Taran holding hands, kissing; then scenes switch back and forth between Taran and Wayne being the lover. (Wayne uses a condom)

Malek & Tasia in front of Columbus statue; Malek trashing Columbus.

Bremmie provokes Malek by calling him “coon,” and Tasia stops Malek from going after Bremmie.

Bremmie studying white supremis literature and Malek knocks on door and confronts Bremmie for earlier remark. Bremmie wimps out and trashes his roommate’s side of room after Malek leaves.

David (Jewish roommate) comes in, finds his stuff trashed, confronts Bremmie, Bremmie goes off, Malek comes in, Bremmie gets gun and threatens to kill both “Jew and Nigger.” “You’re gonna die monkey.”

Security holds Malek and lets Bremmie go. (Another reason for Malek to be pissed)

Security finds Nazi symbol in Bremmie’s stuff in dorm room.

Security tells Black students to move on; Fudge stands up to them again for not telling the group of white students the same thing.

Wayne & Kristen don’t know what’s happened to Malek (Bremmie going off).

Next day, Wayne asks Malek why he moved out of their dorm room: Malek says

he thought David & Wayne might want to room together; Malek says he wants to be with his own people. Says their not the same even though they got along as roommates. Wayne contends he is not a white supremacist.

Prof. talks to Fudge White & Malek Williams on steps. Prof. says info is power.

Kristen & Monet in dorm room; Monet tells Kristen she's naive.

Kristen posts flyers about a Peace Fest.

Fudge sees Bremmie on campus. Bremmie is talking to Scott at table about dropping out of college; Scott tells him the white men need him to stay in school.. ... Fudge and friends fight the Skin Heads.

Black students in apt; hyped up over fight; Tasia fearful Malek will drop out of school.

Skin heads in apt. Hyped up over fight.

Fudge philosophizes about "white men OWN everything."

Scott manipulates Bremmie in "doing something," and gives him a rifle to use.

Peace rally - bands

Malek & Tasia walking to peace rally.

Bremmie going up stairs to roof of building

Prof. watching rally.

Bremmie with rifle on top of building

Kristen at rally speaking for peace.

Skin heads beating gay guys.

Skin heads tell Bremmie to shoot... Shoot!

Malek & Tasia at rally

Everyone running as Bremmie shoots into crowd and hits Tasia in back.

Malek is stunned and in shock at sight of Tasia dying. Tasia screams "WHY?"

Prof. tells Malek to get help for Tasia.

Malek in SHOCK and goes into building after Bremmie; they fight and Malek is winning when security intervene and start beating Malek. Security try to calm Bremmie who says he's sorry and he just wanted to be an engineer, but he shoots himself with gun.

Malek comes outside and professor holds him while he grieves.

TV report - white supremists say "White Power" and Scott smiles.

Malek in Prof's office; Prof encourages Malek and believes in him. Prof quotes: "Without struggle there is no progress." and Malek says "Frederick Douglass"; Prof. is proud.

At Columbus statue, Malek and Kristen talk; she blames herself for the shooting.

They introduce themselves and shake hands.

National anthem at graduation; Fudge graduates.

Malek runs across campus and the professor leaves the building.

Last frame is UNLEARN superimposed over the U.S. flag.

Appendix E: Training Packet

Empathy Training “A” Protocols

Celia, plan on starting your group around 10:00am in Room130

- 1. List characters on board and briefly describe who they are.**
- 2. Watch movie all the way through. Do not break as a group.
Let people go to bathroom, get drinks, etc. individually.
Colas, cups, etc. will be in the room.**
- 3. Lunch in room. Pizza delivered around noon. Try not to take more than half an hour and keep group together.**
- 4. Afternoon will be spent in discussion of scenes in movie, taking the cognitive perspective of different characters.**
- 5. Fast forward to each scene and review the events in that scene.**
- 6. Lead discussion on what a character might be thinking and feeling.**

For example, in the date rape scene, ask:

What was going on in Kristen’s mind. What was she thinking at the bar? What was Billy thinking at the bar?

7. Discussion of scenes until 3:15-3:30.

SCENES FOR DISCUSSION:

- 1. Elevator scene (Malek & Kristen) is 2 minutes into the movie.**
- 2. Afro-American students & campus police regarding loud music at party scene (Bremmie, Fudge, campus police) is approximately 13 minutes into the movie.**
- 3. Political science class when Prof. Phipps sends students to financial aid office (Professor Phipps, Kristen, Malek) scene is approximately 16 minutes into the movie.**
- 4. Rape scene (from drinking at bar to Billy responding to Bremmie's comment about "getting laid"; Kristen & Billy)
Is approximately 27 minutes into the movie and lasts about 3 minutes.**
- 5. Bremmie ????**

8. DISTRIBUTE MEASUREMENT INSTRUMENT AND COLLECT BEFORE DISMISSING.

Appendix E: Training Packet

Empathy Training “B” Protocols

1. In large group of 30 students in Room 306, Bev instructs students to remember events/situations when they felt specific feelings. Students write down on the “ANCHORED FEELINGS” form so they can remember these “anchored feelings” later.

(½ hour for this activity)

2. Watch movie together through “rape scene.” Rewind and watch rape scene 2nd time (from bar scene to Billy’s retort to Bremme’s comment)

(Approximately 45 minutes for this activity)

3. Break into small groups of 5-6. At this point, it doesn’t matter which group students go into, as long as groups are of equal size. (See list of facilitators and room assignments.)

4. Introduce selves. Talk briefly about the anchored feelings.

Facilitators lead small group discussions rest of the day.
Do not break as a group. Let people go to the bathroom,

get drinks in the room, etc., individually. Colas, cups, snacks etc. will be in the room.

Sample questions for facilitators to ask:

- **What do you imagine Kristen was thinking and feeling at the bar?**

Ask each student to report on an “anchored feeling” he/she has that corresponds to what Kristen was feeling.

- **What do you imagine Billy was thinking and feeling at the bar?**

Ask each student to report on an “anchored feeling” he/she has that corresponds to what Billy was feeling.

More questions:

- **What do you imagine Kristen was thinking and feeling during the time she was in Billy’s room with him?**

- **What do you imagine Billy was thinking and feeling during the time Kristen was in the room with him?**

- **What do you imagine Kristen was thinking and feeling when she ran out of the fraternity house?**
- **What do you imagine Billy was thinking and feeling when he ran down the stairs after Kristen, when his pants fell off, when Bremmie asked about “getting laid”?**

5. Lunch in the room (probably around 12:30).

Pizza will be delivered to the room. Try not to take more than half an hour and try to keep the group together. Drinks, cups, snacks, etc. will be kept in the room.

6. Small group role plays:

Ask each student to identify 2 recent (within past 2 years) experiences when he/she experienced a moderately strong feeling or conflict with another person and which he/she is willing to role play. Have them jot down some notes regarding these situations on the “RECENT EXPERIENCES” form.

The student next “directs” (with guidance of the facilitator) other students in the role play until it is satisfactorily accurate. Then the facilitator asks the

student to take the role of the “other person” in the situation and redo the role play.

The facilitator and group members ask questions like “What was it like to be the other person?” (both cognitively and affectively). **TRY TO GET A STRONG SENSE OF WHAT “THE OTHER” EXPERIENCED.** Using the anchored feelings procedure, ask “How would the other want you to behave in the future?”

The goal is to get each student to do two of these, but if anyone is uncomfortable, don’t push them. If they’re observing or discussing others’ role plays, they still learn from the role plays.

7. **START WINDING DOWN AROUND 3:30-3:45.**
8. **Keep a list of who participated in role plays and how many they did.**
9. **DISTRIBUTE MEASUREMENT INSTRUMENT (IRI) AND COLLECT BEFORE DISMISSING.**

Appendix E: Training Packet

STUDENT FLOW CHART

1. Come in Henson Hall at west-end entrance.
2. Receive instruction to go to **ROOM 209**.
3. Receive **CONSENT FORM** and **INFORMATION SHEET**
at door of room 209.
4. Fill out forms.
5. Turn in forms and receive **IRI INSTRUMENT** to fill out.
6. Fill out IRI instrument and turn it in.
7. Listen to **INTRODUCTION** and **OVERVIEW OF THE**
DAY.
8. Go to the subgroup (A or B) you're assigned to.
9. Spend rest of day with your group.
10. Fill out **IRI INSTRUMENT** again.

Appendix F

“ANCHORED FEELINGS”

(This information is strictly for your use and will NOT be turned in during this training.)

- 1. Remember back to a time when you felt angry. Jot down the situation which evoked this feeling in you.**

- 2. Remember back to a time when you felt lonely and wanted to fit in with others. Jot down the situation which evoked this feeling in you.**

- 3. Remember back to a time when you felt embarrassed in front of your peers. Jot down the situation which evoked this feeling in you.**

- 4. Remember back to a time when you felt hurt when someone took advantage of you. Jot down the situation which evoked this feeling in you.**

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5. Remember back to a time when you felt confused that someone behaved the way he/she did with you. Jot down the situation which evoked this feeling in you.

6. Remember back to a time when you felt guilty for something you did. Jot down the situation which evoked this feeling in you.

7. Remember back to a time when you felt afraid or anxious. Jot down the situation which evoked these feelings in you.

Appendix G

Role Play Summary

Facilitator, please fill out the following information for each group participant at the end of the training.

Name of Person	Participated personal role play?	How many?	Participated other role play?	How many?
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1.				
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2.				
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3.				
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4.				
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5.				
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6.				
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APPENDIX H

RECENT EXPERIENCES

Remember back to a recent situation when you felt an intense emotion or conflict with another person. Briefly jot down the situation.

Think back to one other recent situation when you felt an intense emotion or conflict with another person. Briefly jot down the situation.

VITA

Beverly McKee was born in Wilson County, Tennessee, on February 2, 1947. She lived in Japan, Germany, Tennessee, Georgia, and Maryland during her childhood. She graduated from high school in Edgewood, Maryland, in 1965 and received her B.A. in English from Towson University in Baltimore in 1969. She taught public school for five years in Maryland, South Carolina, and Ohio. Next she was a social services administrator in Pennsylvania and South Carolina for a total of nine years.

She accumulated over 30 graduate hours in education and counseling during these working years, but finally went back to school fulltime and received her MSSW in 1985 at the University of Tennessee in Memphis. She was President of her class and received the Chancellor's Citation for Student with Exceptional Professional Promise and an award for leadership in student government.

Next she worked in a variety of jobs from writing grants for the Dept. of Corrections project (through the UTK College of Social Work) to teaching a Social Welfare class at UTK. She has worked as a psychiatric social worker in several hospitals in the Knoxville area: Peninsula Village, The Oaks of St. Mary's, Ridgeview Psychiatric Hospital, and Blount

Memorial Hospital. She has been in private practice for three years and specializes in marriage, family, and group therapies. She is with the Northshore Group in Knoxville. She defended her dissertation in December 1997.