Rowan University Rowan Digital Works

Theses and Dissertations

5-2-2000

Identified students with anger management difficulties and their locus of control

David Andrew Davenport Jr. *Rowan University*

Follow this and additional works at: https://rdw.rowan.edu/etd

Part of the Educational Psychology Commons

Recommended Citation

Davenport, David Andrew Jr., "Identified students with anger management difficulties and their locus of control" (2000). *Theses and Dissertations*. 1653. https://rdw.rowan.edu/etd/1653

This Thesis is brought to you for free and open access by Rowan Digital Works. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Rowan Digital Works. For more information, please contact graduateresearch@rowan.edu.

IDENTIFIED STUDENTS WITH ANGER MANAGEMENT

DIFFICULTIES AND THEIR LOCUS OF CONTROL

by David Andrew Davenport Jr.

A Thesis

Submitted in partial fulfillment of the requirements of the Master of Arts Degree of The Graduate School at **Rowan University** May 2000

Approved by

Date Approved $M_{a_1} \rightarrow 1200$

ABSTRACT

David Andrew Davenport Jr.

Identified Students With Anger Management Difficulties And Their Locus Of Control 2000 Dr. John Klanderman School Psychology Program

The purpose of this study was to consider whether students who had been identified as having anger management difficulties, have a significantly higher degree of External Locus of Control when compared to a random sample of their classmates. The participants included 45 students (18 males and 27 females) from a High School in the Northeast Region of the United States, between the ages of 14 to 19 years old.

The Nowicki-Strickland Internal External Locus of Control Scale for Children was used to assess the Locus of Control orientation in the subjects. The scores from the subject group were then compared to a random sample of their classmates, who formed the control group. The results of the instrument given to the two groups was analyzed using the Independent T Test for Two Independent Samples.

The study's *t value* did not fall within the rejection region, leading to the rejection of the null hypothesis and the acceptance of the alternate hypothesis that the subject group would have a significantly higher degree of external Locus of Control than the control group.

MINI- ABSTRACT

David Andrew Davenport Jr.

Identified Students With Anger Management Difficulties and Their Locus Of Control 2000 Dr. John Klanderman School Psychology Program

The study was to consider whether students who had been identified as having anger management difficulties, have a significantly higher degree of External Locus of Control when compared to a random sample of their classmates.

Using the Nowicki-Strickland Locus of Control Scale for Children, the study found that the subject group had a significantly higher degree of External Locus of Control than the control group.

ACKNOWLEDGEMENTS

I would like to thank Dr. John Klanderman, Professor and Academic Advisor at Rowan University, for his support and encouragement throughout my completion of this degree.

I would like to thank my parents and my siblings for their continuous support, encouragement and love throughout my years and for their support in my completion of this project. I would like to make an extended thank you to my father and my brother, as they too, have gone through this process and have supported my efforts.

I would like to conclude with a thank you to my wife, Nancy Marie, and my children, Drew Charles and Deanna Christine, to whom this paper is dedicate to. Without their support, love, encouragement and sense of humor, this task would not have been accomplished.

CHAPTER ONE	page 1.
Need	page 1.
Purpose	page 2.
Hypothesis	page 2.
Theory	page 3.
Definitions	page 6.
Assumptions	page 7.
Limitations	page 7.
Overview	page 8.
CHAPTER TWO	page 9.
Anger and Adolescents	page 9.
Anger Management and Adolescents	page 13.
Locus of Control and Adolescents	page 16.
Summary	page 22.
CHAPTER THREE	page 24.
Sample	page 24.
Instrument	page 24.
Methods	page 26.
Variables	page 27.
Design	page 27.
Testable Hypothesis	page 27.
Analysis	page 27.
CHAPTER FOUR	page 28.
Restatement of the Hypothesis	page 28.
Results	page 28.
Interpretation of the Results	page 29.
Summary	page 30.
CHAPTER FIVE	page 31.
Summary	page 31.
Discussion	page 32:
Conclusions	page 33.
Implications for Future Research	page 35.
REFERENCES	page 37.
APPENDIX A Raw Scores	page 42.
APPENDIX B Internal Control Scores	page 45.

Table 4.1 RESULTS

page 29.

CHAPTER ONE

NEED

Pearl, Mississippi. West Paducah, Kentucky. Jonesboro, Arkansas. Edinboro, Pennsylvania. Springfield, Oregon. Littleton, Colorado. Towns in America that few may had know about until incidents led their names to be known nationwide. With similar recent events within schools in America, that have led to the tragic shooting deaths of students and staff, people are left searching for an explanation as to this rise in violent school incidents. Some have blamed the American society, saying the foundation for such destructive behavior is non-intact and uninvolved families, the proliferation of weapons, violent media images, drug abuse and the inability of some individuals to handle frustration and disappointment. One of the end result of these factors is to leave students feeling alienated from their school and community. With each event, there seems to be a search and need to answer the "why" ("why did this happen here, why did someone do this"). From these "whys", the question has arisen as to what can be done to prevent these incidents from reoccurring.

Some school districts in the country have attempted to develop possible preventative measures for violence by initiating or enhancing security around a school campus, such as having students and staff wear identification badges. Other districts now have metal detectors at the entrances in the buildings or have police or security personnel walk the halls.

Still other districts have responded to the potential for violence by

developing peer mediation, conflict resolution and anger management curricula and workshops for identified individuals.

The school district from which this writer is employed, requested the writer develop and implement an anger management program, where students who were identified as having difficulties channeling their anger, would hopefully learn new skills to address their frustrations. The program was developed and implemented, as this study will focus on students who were assigned to this intervention format.

But the questions still remain as to why these violent events have occurred within the past few school years. In considering the many possible factors that could lead to violent outburst, this writer focused on an individual's sense of personal control and how that sense of control could influence his/her behavior, especially how a individual's sense of control was related to dealing with frustrations, disappointments and anger.

PURPOSE

The purpose of this study is to consider whether students who have been identified as having difficulties expressing and managing their frustrations and anger behavior and who have been assigned to a anger management intervention workshop, have an internal or external locus of control as compared to a sample of classmates.

HYPOTHESIS

Students who are identified as having difficulties dealing with frustration and

anger, will have a significantly higher degree of external locus of control than a random sample of their non-identified classmates.

THEORY

The first reported internal versus external control or reinforcement (I-E) study was done by E. Jerry Phares in 1957. Phares (1957) goal was to determine the effect of reinforcement in skill and chance situations. His study found that changes in expectancy that followed success or failure, were greater in situations where a positive performance was directly dependent on luck or chance.

The I-E concept was first developed and professed by Julian B. Rotter in 1966. Rotter's (1966) writings not only defined the concept but also described a social learning theory structure for which the concept could be incorporated. Rotter developed the I-E Scale, which was designed to measure the concept of Locus of Control, the less precise phrase he coined.

Some who have studied the Locus of Control concept have employed the theory without considering how the concept fits into the larger scheme of factors which affect an individual's behavior. Such people sometimes use the concept as the only determinant of one's behavior in a given situation. This simplistic use has sometimes led to failure in prediction, frustration over the possible small amount of variance accounted for by Locus of Control or the difficulty in generalizing from one study to the next. But Internal versus External Control of Reinforcement was originally seen, as a concept, to be only one variable in a broad social learning theory scheme. This theory, described by Rotter in his

З.

book <u>Social Learning and Clinical Psychology</u>(1954), describes several variables which act in concert to produce a reaction or behavior in a certain situation- namely expectancies, reinforcement values and the psychological make up of the individual. Rotter believed that variance in situations could influence both the magnitude of an individual's expectancies and the importance of the goal to the person.

Internal versus External Control of Reinforcement is considered as a general expectancy on how best to categorize a situation that surfaces to the individual with a problem. Most human social interactions confront the person with a problem, regardless of the specific needs of the people involved. It is believed that by considering situations as falling somewhere along the I-E continuum, the person feels they can better deal with the situation. Locus of Control, therefore, should be viewed as a general expectancy or belief that the best way in which the connection between a person's behavior and the subsequent occurrence of a positive or negative outcome, is one's view of the problem.

In any given situation, the expectancy that a specific behavior will result in a particular outcome is thought to be determined by three factors or variables. The first is the specific expectancies for success of a given behavior which has been based on previous expectancies related to the situation. Second, there are general expectancies for success that are based on experiences which were generalized from related situations. Third, there are many problem solving expectancies that have been generalized, as which I-E is but one example. These three factors interact, to give the individuals expectancy for success of the behavior being questioned. The amount of an individual's

previous experience with the situation, will determine the influence of each factor. A new situation would call for a generalized expectancy of an outcome. Situations which are familiar to the individual would be more likely lead the person to rely on expectancies based on these previous related experiences.

When reinforcements (either negative or positive) are viewed by the individual as being the result of their own behavior or individual characteristics, we have an example of internal beliefs. External beliefs, in contrast, involves the opinion that reinforcements occur as a result of chance or luck, because of powerful others or simply, unpredictable events. Beliefs about Locus of Control or I-E are not either/or but can fall along a continuum marked by external beliefs at one extreme to internal ones at the other end.

The most well known and widely used tool to measure Locus Of Control as a personality characteristic is the I-E Scale, first introduced by Rotter in 1966. The Scale evolved, with the help of four others in collaboration with Rotter, to consist of twenty three forced-choice items along with six additional items to help hide the purpose of the tool. This forced-choice scale had the subject read a pair of statements and then indicate which of the two statements he/she more strongly agreed. The score ranged from zero (the consistent belief that individuals can influence the environment - that rewards come from internal forces) to twenty three (the belief that all rewards come from external forces). Items similar to ones on Rotter's scale are as follows:

1. It is silly to think one can really change another's basic attitudes.

2. When I am right, I can convince others.

Rotter's original findings showed little evidence that the tool was anything but one dimensional. Since then, considerable research has begun to uncover how the I-E Scale can be multidimensional in nature, as a variety of additional scales have been developed to measure specific areas such as the impact of health care, political views and child rearing. Many of these are adult scales but scales for children have also appeared. The number of measurement tools has become so numerous for Internal versus External Control of Reinforcement research that there is an entire volume of work dedicated to this topic.

DEFINITIONS

<u>Attributional</u> - a tendency to attribute one's behavior to internal or external factors, stable or unstable factors and a belief on why people behave in a certain way.

<u>External Locus of Control</u> - a person perceives that reinforcement is independent of their own behavior or that the reinforcement is largely outside themselves.

<u>Internal Locus of Control</u>- a person perceives that reinforcement is due to their own behavior or that reinforcement is largely within themselves.

Locus of Control- a theory regarding a individual's personality, developed by Julian B. Rotter, where an individual attributes control over the receiving of reinforcements- either inside or outside the self.

<u>Reinforcement</u>-an event that strengthens an individuals view or behavior, or a stimulus that follows a response and alters the frequency of the response.

Social Learning Theory of Personality- this theory suggests that behavior that is

rewarded will lead to expectancy that the behavior will continue to produce positive outcomes or rewards in the future.

ASSUMPTIONS

This research does not take into account the socioeconomic or cultural background of the students surveyed in the anger management program or from the random sample of the school population. It is believed that the socioeconomic or cultural background of the individual could have a bearing on an individual's Locus of Control, but the decision was made that accounting for these factors would complicate the research to a unacceptable degree. Consideration was not given as to whether the students who have completed the anger management workshop, felt that the workshop has made a difference in viewing how they handle frustrations and their anger.

The purpose of the study was to determine if a relationship existed between a student's Locus of Control and their views of dealing with their trustration and anger. The writer is not assuming there is a causal relationship between the student's Locus and Control and their attempt to handle frustration and anger, only that the students identified will have a higher level of external control.

LIMITATIONS

One concern of this study was the limited number of subjects that were surveyed concerning their Locus of Control. To randomly sample the number of students who had been assigned to the anger management workshops, would

contain the sample to a limited few. So all the students who had been assigned or requested to participate in the workshops, will be surveyed and will be compared to a random sample of their schoolmates.

OVERVIEW

Chapter One addressed the problem and nature of this study. Chapter Two is a review of the literature concerning Locus of Control and Adolescents. In Chapter Three, the study's design will be discussed at length. In Chapter Four, the results of this study will be analyzed with a summary and conclusion left for Chapter Five.

CHAPTER TWO

When beginning the review of early and more current literature surrounding adolescents, this writer came upon articles and areas that were viewed as interwoven for this study. Besides reviewing the previous writings concerning adolescents and Locus of Control, the writer found interesting and in his opinion, relevant articles concerning adolescents, anger and anger management intervention formats focusing on children. Therefore, this review of the literature will include these three foci, beginning with studies done with adolescents and anger.

ANGER AND ADOLESCENTS

Two studies looked at children and adolescents who had been institutionalized because of their behavior. The work of Finch and Eastman (1983) investigated the relationship between an individual's self-reported anger, their peers reporting of anger of the subject, their teacher's rating of anger for the subject and the presence of anger management problems in hospitalized emotionally disturbed children. The study of the thirty eight children, ages six to sixteen, found a significant relationship between the child's self-reported scores on a inventory and the subjects behavior as perceived by their peers and teachers at the time of their hospitalization. The work of Dodge and Price (1990) looked at adolescent boys in a maximum security prison to assess the adolescents hostile attributional biases. They discussed how adolescents with hostile attributional tendencies are more likely to experience

behavioral problems when interacting with their peers. Their work found that these biases were positively related with an aggressive conduct disorder, poor socialization and interpersonal communications skills and with a reactive aggressive response to peer interactions. The researchers concluded with how they viewed these attributional biases as being connected with interpersonal aggression that results in ineffective anger management.

The research by Kollar, Groer, Thomas and Cunningham (1991) was done to determine if an adolescents' anger expression changed over time and if there were gender differences. The students (two hundred and seventy five high school students) were surveyed in their freshman year and again in their senior year. The study found that anger scores appeared to be stable over time for both sexes. There were gender and time differences in levels of anger over the time period for some of the items, indicating that certain levels or dimensions of anger changed over time and by gender.

Two studies looked at whom adolescents felt they could express their frustration and anger. Research done by Jones, Peacock and Christopher (1992) explored how black high school students recognized and expressed their anger. Their work found that in all the teens surveyed, the teens could recognize when they were angry and that most of the teens expressed their anger to friends, to siblings and to their mothers. Also younger teens (ages 14 to 15), when compared to older teens (18 to 19 years old) identified their mothers as the ones who made them angry. In terms of behavior, females were more likely to cry or be silent when angry. Finally, their study found that students from a one parent home did not differ in their expression of anger from students

from a two parent home. The study by Zeman and Shipman (1997) examined the influence of emotion type (anger, sadness), who the audience was (family or friends), gender and age on fifth, eighth and eleventh grade adolescents emotional management decisions and outcome expectancies. Their work found that eighth grade adolescents reported regulating their emotions more often and expected the least interpersonal support from their mothers. All the adolescents expressed greater self-efficacy and regulation of sadness than of anger. The males reported dissembling emotion and expecting a negative interpersonal response to emotional behavior than their female counterparts. In his book, Berkowitz (1993) suggested that direct forms of aggression such as hitting another individual is more characteristic of a male, while females are more likely to engage in indirect forms of aggression, such as refusing to acknowledge others or spreading rumors when they are angry.

In a study by Kubany, Richard, Bauer and Muraoke (1992), the researchers wanted to investigate the communication of negative feelings between adolescents in close relationships. They predicted and found that aggressive statements would be rated as more aversive and would produce more antagonism and less solicitous and supportive reaction than would an assertive statement. The work found that statements including anger words (angry, mad and resentful) would be and were rated as more aversive and would produce more animosity and less support that would statements including distress words (anxious, frustrated and upset).

Fearing that little attention had been given to young people whose, cognitive, emotional and behavioral limitations appeared to exclude them from

benefiting from previously developed cognitive behavioral approaches to deal with aggression, Kellner and Tutin (1985) decided to look at this group. Their study found a group intervention program at a special needs school, demonstrated that older teens and young adults could benefit from cognitivebehavioral approaches if the program was modified to meet their special learning needs. With skill building, reinforcement and normalization of anger, the multihandicapped students were able to learn the physiological triggers and consequences of anger as well as develop coping strategies for managing their anger while reducing their aggressive acting out.

The purpose of the work by Debaryshe and Fryxell (1998) was to present a developmental model of anger. They theorized that the model begins with the childs' awareness of their own and other peoples' anger, depending on the models the child is exposed to and how conflicts are resolved by family members. How socialization and emotional expression is shown in the home affects the childs' physiological reaction, social information processing and behavior strategies for anger producing situations. From this, the writers believed, the child brings these characteristics to the interaction with their peers and how this anger and emotion management skills, affect peer social status.

The work of Furlong and Smith (1998) was "to develop an empirically based typology of anger problems in youth that, drawing from current theoretical models, would include the full range of anger-related emotions, cognitions and behaviors in denying specific subtypes." (Furlong, Smith, 1998, pg. 229.) They also wanted to develop a typology to include well adjusted and poorly adjusted anger subtypes as these subtypes would be important when devising and

implementing prevention and intervention programs for a school. Students from grades six to twelve were found to fall into six anger preference styles. The conclusion of their study suggested that students who fall into the extreme anger subtype are in need of a comprehensive, intensive therapeutic intervention as the youth expressed their feelings and thoughts in destructive and socially unacceptable ways.

ANGER MANAGEMENT AND ADOLESCENTS

The work by Moon and Eisler (1983) compared the effectiveness of three behavioral treatment strategies with a subject group in the reduction of anger. A group of older teens were assigned to either a cognitive stress inoculation program, a problem solving and social skills treatment program. Their study found that the cognitive oriented stress inoculation training group significantly reduced their thought provoking anger responses. The problem solving and social skills training groups both reduced anger provoking cognition and showed increased levels of assertive and socially acceptable responses to a situation.

Two studies looked at specific programs to address anger difficulties in adolescents. The first by Feindler, Marriott and Iwata (1984) developed as their goal, to teach adolescents how to inhibit their anger and what an adolescent could do in situations that could instigate aggression. Their program, Anger Control Training (A.C.T.) had a adolescent identify triggers and cues and how to self-evaluate a situation that could lead to an anger response. The second study, by Glick and Goldstein (1987), looked at a program called Aggression

Replacement Training (A.R.T.), which was described as a psychoeducational intervention for assaultive and hostile adolescents. The study looked at adolescent males who were either hospitalized or had posed severe anti-social behaviors in their community. The program's goal was to teach the individuals how to control their anger, alternatives to being aggressive and to learn more socially acceptable alternatives to resolving problems. The studies conclusions indicated that the A.R.T. program was a viable intervention for aggressive, abusive adolescents.

The work of Hazaleus and Deffenbacher (1986) followed a group of older teen males and females who were exposed to cognitive and relaxation coping skill inventions to deal with anger. After experiencing the treatment modalities of cognitive and relaxation interventions, the teens showed significant anger reduction. A one year follow up study, continued to show that the learned technique significantly reduced anger responses in the group. Deffenbacher (1988) followed up his work in 1986 in viewing whether cognitive relaxation and social skills training were effective techniques in reducing anger responses in older teens. The study found that after one year, both cognitive relaxation and social skills subjects reported experiencing less general anger, personal situational anger and less psychophysiological reaction to anger provoking situations.

A study by Deffenbacher and Stark (1992) looked at the effectiveness of combining relaxation coping skills with cognitive coping skills in the treatment of anger. When studying older teens, they found that the two coping skills techniques significantly reduced anger responses in the students and that the

techniques were found to be significant in a one year follow up study. This theory was continued by Deffenbacher, Lynch, Oetting and Kemper (1996) by reviewing the effectiveness of cognitive relaxation coping skills and social skills training to deal with anger difficulties. When studying sixth and eighth graders, the cognitive relaxation group and social skills training group showed reduced levels of outward negative anger expression, as well as an increase in a more calm, controlled anger expression.

Two reports looked at addressing intervention strategies for addressing student aggression. The study by Hudley, Britsch, Wakefield, Smith, Demorat and Cho (1998) looked at inappropriate aggression and attributional bias and whether attribution training might be successful in reducing childhood aggression and eliminating biased judgments of a classmates behavior. Their work studied third grade through six grade male students as results suggested that improvements in the subjects' behavior was related to changes in the students' attributions. Also, the students participating in a attributional invention could improve the social behavior of the group of students.

Larson (1998) offered in his perspective how the management of aggressive student behavior at a high school level needed to reflect a research based, developmentally and culturally sensitive continuation of violence prevention efforts that began in earlier grades. He believed that school systems that develop and implement developmentally appropriate intervention programs and begin the education in the earliest grades, are at an distinct advantage when addressing the needs of these same students when they reach their high school years.

Furlong and Morrison (1994) previously suggested that high school employees should collaborate with their elementary level colleagues in providing services to the elementary and middle schools in developing comprehensive, research supported primary and secondary prevention programs and subsequent procedures.

LOCUS OF CONTROL AND ADOLESCENTS

Two studies looked at the association between Locus of Control and depression in youth. The work of Aiken and Baucom (1982) looked at whether there was a relationship between depression and Locus of Control. They found that holding an external belief was that associated with higher levels of psychological disturbance, particularly depression. In his study, Lester (1988) reviewed the work of Aiken and Baucom, but suggested the association between and Locus of Control and depression may be the person's amount of anger as the mediating force. Lester theorized that if a person had an external belief because of powerful others and that the person was unable to express their anger towards these powerful others, then the subject may experience increased levels of depression. His study on older teens and college students found that depression "was positively associated with belief in control by powerful others only for those who were unable to express their anger physically, verbally, or indirectly'. (Lester, 1988, pg.414)

Work by Folkman (1984) analyzed the importance on one's personal control in stressful situations and the person's coping processes. She outlines a

complex set of connections between control beliefs, views of what are seen as threats or challenges to the individual and the use of problem solving strategies. She went on to theorize that problem solving strategies are more adaptive for the person if they are directed to the individuals environmental views that are perceived as changeable, while emotion driven efforts are more adaptive if the situation is viewed as uncontrollable.

Weisz (1986) expanded on Folkman's views by suggesting that key developmental tasks for the individual involves learning to distinguish between situations when persistence pays off for the individual, compared to situations that do not, and that the perceptions of persons' control plays a significant role in this judgment process.

The writings of Parrish and Nunn (1986) posed the question "how do our perceptions of family reflect evaluations of other significant family member as well as our own perceived sense of self esteem and personal control?" (Parrish,Nunn, 1986, pg.519) When studying a group of late teens in college, they found the teens' views of themselves, was linked to their views of their family. If the family was seen as a positive entity, the students valued themselves as members of the family. When the students viewed their family in a negative light, they viewed themselves in a negative manner and saw themselves as having less personal control.

Chiu (1987) wanted to look at the cross-cultural application of the Locus of Control construct between the Chinese culture and American. Chiu postulated that the Chinese culture was situation-centered and emphasized if an individual

was successful, the success was attributed to and shared with their family. He went on to predict that Americans would be more internal than the Chinese students in success situations. When comparing tenth graders from Taiwan to tenth graders in America, Chiu found that the American adolescents were more internal than their Chinese opposites in assuming personal responsibility for success. Chiu also found that the Chinese adolescents were more internal that the American students when assuming responsibility for failure situations.

Dubois (1987) looked at 8 to 18 year olds to assess the students awareness of norms of internality with instructions to gain approval or disapproval from an adult like their teacher or parent. Dubois' study showed that the young people were well aware of the social desirability of being internally motivated for explaining behavior and for explaining reinforcements of outcomes.

Ortman (1988) reported on a small number (sixteen in all) of freshman and seniors from a high school were interviewed on their views and feelings concerning personal control and responsibility. She hypothesized that the younger teens were less knowledgeable and therefore would feel less in control and less responsible than the older teens surveyed. Ortman did not find the relationship between responsibility and life satisfaction as significant for the group as a whole, but she did find a significant result for the older teens. She discussed how the older students felt they had more control in their lives then when they were younger, and thought they would feel even more in control when they grew older. Ortman also hypothesized that the feelings of being in control decreased in the teenage girls as they matured but increased in the

males.

Nunn and Parish (1992) looked at differences between High School students who were at risk for academic failure and a control group. They wanted to determine if psychosocial differences exists between students who have been identified as being at risk for school failure. Their findings suggested that the at- risk students Locus of Control was more externally oriented, indicating the students believed their behavior had little effect on outcomes. The work of Howerton, Enger and Cobbs (1993) continued with this focus of following students who were seen as at-risk for academic failure. They examined the relationship between Locus of Control and academic achievement for teenage African American males who were identified by their teachers. The study found that the sixth through eighth grade males were more externally controlled that a normative sample of their male classmates. The researchers went on to theorize that "generalized locus of control can be used to explain some of their school performance." (Howerton,Enger, Cobbs, 1993, pg. 213).

Fertman and Chubb (1992) in a longitudinal study, looked at whether a short psychoeducational intervention program, they termed "personal empowerment program", would affect an adolescents' level of involvement in extracurricular activities, their self-esteem and/or the individuals locus of control. The ninth graders were surveyed six months after they participated in the empowerment program. Their study did not find a significant difference in the mean scores for locus of control or self-esteem, but the actual mean scores showed that the study group did move towards a more internal locus of control

after experiencing the empowerment program.

Two studies looked at locus of control and an adolescents approach in dealing with stress. Compas, Banez, Malcarne and Worsham (1991) discussed and summarized the changes in how a adolescent views personal control, the relationship between perceived control and techniques used by the individual to deal with stress "and the interaction between perceived control and coping in their association with psychological adjustment and disorders." (Compas, Banez, Malcarne, Worsham, 1991, pg.23) Their work reviewed how the individual's perception of personal control was related to the methods used by the adolescent to cope with stress. Their conclusions suggested that programs should be developed to focus on increasing a child's awareness of whether control over a stressful situation is possible and the need to use or adapt problem solving skills to match this awareness.

Gamble (1994) looked at young adolescents and young adults, as she questioned the subjects on their appraisals of and efforts to cope with common stressful situations- a conflict with their mother, with a friend and with failure. For each stressful event, the subject was to rate how much control they had on the outcome, how the conflict would proceed and the perception of who was in control. Gamble's results revealed a significant correlation among the appraisal of the situation by the subjects and the coping variables across the three conflict producing events. She also found that the young adults, when compared to the young adolescents, were less likely to blame another or attribute the cause to an unknown source and that they were more likely to assume responsibility for the conflict producing event.

Four studies looked at the influence of the family and parenting styles to one's locus of control. Enger, Howerton and Cobbs (1993) looked at the relationship between three factors- parental verbal interaction, internal/external locus of control and self-esteem for at-risk African-American males. Their study suggested that if the males assumed more responsibility for what occurred in their lives, they would tend to feel better about themselves. Conversely, the males who believed that events in their lives happen by luck or by chance, would tend to feel worse about about themselves. Also, they found that the males who scored higher on internal scales received more positive parental verbal communication, males who scored higher on external scales tended to receive more negative parental verbal communication.

The study by Jory, Xia, Freeborn and Greer (1997) focused on further developing and refining a classification criteria of a families problem-solving structure when the family had adolescents in the home. Their work concentrated on how a family would engage in problem solving, how solutions were reached, the communication patterns and how affect was managed. Their work found that family problem solving interactions could be classified based on the concept the researchers called family locus of control. The four types of family locus of control- individualistic, collaborative, authoritarian and external, depended on the standards developed by the parents and how they viewed one's sense of control.

Morton and Mann's (1998) study discussed how previous research had suggested that a non-controlling, independence-encouraging parenting style

was correlated with a child having an internal locus of control. They found that parental acceptance and a child's centeredness was found to be more closely related to internal control beliefs in preadolescent children and adolescents. But they found that parental controlling behavior was more related to higher internal control beliefs in preadolescent children and higher external control beliefs in adolescents.

Work done by McClun and Merrell (1998) looked at the relationship between an adolescents' perceptions of their parents responsiveness and demandingness, and the adolescents' sense of personal control. They concluded to suggest if a parent showed an authoritative style of parenting, this led to the development of self-adequacy by being related to a more internal Locus of Control orientation and a stronger self- concept. If a more permissive or authoritarian parenting style was presented, a greater negative pattern of socio-emotional development in the adolescent was found.

SUMMARY

A review of the literature surrounding adolescents and their attempts to deal with anger and their sense of personal control, a few points came across very clearly. As for adolescents and their anger, adolescents know when they are angry and that there are certain people an adolescent feels they can express their anger towards. But how the adolescent expresses their anger was the key for the individual. Further work went on to suggest a developmental model of anger and to categorize into anger styles, how people express their anger.

When reviewing programs that have been suggested to deal with anger adolescents, early work discussed developing and teaching relaxation techniques and cognitive coping skills to deal with anger. This section concluded with discussing how intervention programs need to be research based and developmentally appropriate for students and that the intervention formats needed to begin in the early years of a child's education, which requires a collaboration of staff members between all levels of a child's schooling.

The review concluded with discussing the work done with adolescents and their sense of personal control. Two studies looked at the association between Locus of Control and depression in adolescents. The review progressed with discussion of how family influences played a role in an individual's sense of personal control and how two cultures viewed personal control. This section continued with the relationship between being at risk for academic failure, self esteem and Locus of Control in an adolescent. Two studies then looked at Locus of Control and an adolescents approach in dealing with stressful situations. The review then concluded with the influence of the family and parenting styles on an adolescents sense of personal control.

CHAPTER THREE

SAMPLE

Participants included 45 students from a High School in the Northeast region of the United States. These students were enrolled in all four grades of the High School, ninth through twelfth grades, with the age ranges from 14 to 19 to include 18 males and 27 females. The population of the High School was six hundred sixty seven students, 318 males and 349 females with the ethnicity of the student body being 56 percent Caucasian, 37 percent African American, 3 percent Hispanic and 2 percent Asian. Of those six hundred and sixty seven students, 188 or 28 percent were provided free or reduced lunches.

The participants were either assigned or requested on their own, to attend an Anger Management workshop during the school day. If the students were assigned to the workshop, they either were involved in a physical altercation with a classmate, had a verbal confrontation with a staff member or classmate or tried to incite a confrontation with another student. Of the participants in this study, six of the students sought the workshop on their own, while the other 39 were assigned by the administration of the school to attend the workshops under the previously mentioned criteria.

INSTRUMENT

The Nowicki-Strickland Internal External Control Scale for Children (Nowicki-Strickland, 1973) was used to assess the Locus of Control orientation in the subjects. The Nowicki-Strickland Scale was normed on 1,107 students in

grades three to nine and was based on the adult level Locus of Control Scale created and published by Julian B. Rotter in 1966. The Scale includes forty self report statements to which the students answer "yes" or "no". The items are worded so that the responses indicate an external orientation to Locus of Control and receive a score of "1" and items indicating a more internal orientation receive the score of "0". Therefore, a higher score is indicative of a more external Locus of Control. Psychometric properties of the scale were reported by Nowicki and Strickland, with estimates of internal consistency ranging from the .63 level to .81 level, when using the Spilt Half method, corrected by the Spearman-Brown Formula. Test-retest reliability coefficients range from .76 at a five week interval to a .63 at a nine month interval.

Nowicki and Strickland looked at the construct validity of their scale and reported on the instruments relation to other measures of Locus of Control. When comparing their instrument to three other measures (Intellectual Achievement Responsibility Scale, Bailer-Cromwell Scale and the Rotter Internal-External Scale) they found correlations ranging from .31 to .61. Nowicki and Strickland suggested the correlations supported their view of the validity of the instrument.

Four previously mentioned studies used the Nowicki-Strickland Scale in their work. Nunn and Parish (1992) used the instrument to measure Locus of Control in high school students who were at risk for academic failure. The instrument was used by Fertman and Chubb in their 1992 study to evaluate whether a intervention program would affect a students' activity involvement, self-esteem and Locus of Control. Enger, Howerton and Cobbs (1993) used the scale when

studying the relationship between Locus of Control, self-esteem and parental verbal interaction in adolescent males. The final study cited using the instrument, was McClun and Merrell (1998) where they studied the relationship between and adolescents' perceptions of the parents' responsiveness to the adolescent and the adolescents' Locus of Control orientation.

One final point regarding the instrument, Lefcourt (1991) reported that the Nowicki-Strickland Scale as one of the better measures of Locus of Control for children.

METHODS

For the control or comparison group, 45 students, 25 females and 20 males, were randomly approached during their lunch period, and requested to complete a survey. Every forth student who walked into the lunchroom on the chosen day, was approached to complete the survey. The control group was formed from smaller groups of 7 or 8 students, who were directed to a classroom, given the instrument and first listened to a prepared statement from this investigator, on how to compete the instrument. Once the smaller group of students completed the instrument, they were read a prepared statement from the investigator on the purpose of the instrument and the study. This random selection of students to make up the control group, continued for the three lunch periods of the chosen day until the control group of 45 students was established.

The study group was also approached during their lunch periods to complete the instrument, broken down into the same smaller groups numbers as the control group, read the same instructions and the prepare statement at the

conclusion of the completion of the instrument.

VARIABLES

Independent Variable- for the subject group, the independent variable was the the subject group themselves.

Dependent Variable- for the subject group, the dependent variable was the student's sense of personal control or Locus of Control.

DESIGN

The subject group was to be given the instrument after they have completed the Anger Management workshops. The subject group results were then compared to results from the control group.

TESTABLE HYPOTHESES

Null hypothesis: No significant difference will be found in the measure of Locus of Control between the subject group and the control group.

Alternate Hypothesis: The subject group will have significantly higher degree of external Locus of Control than the control group

ANALYSIS

The results of the instrument given to the two groups was analyzed using the Independent T Test for two independent samples.

CHAPTER FOUR

RESTATEMENT OF THE HYPOTHESES

Null Hypothesis: No significant difference will be found in the measure of Locus of Control between the subject group (anger management group) and the control group (random sample of schoolmates).

Alternate Hypothesis: The subject group will have a significantly higher degree of external Locus of Control than the control group.

RESULTS

The results in Appendix A are the scores from the subject and control group on the Nowicki and Strickland Locus of Control Scale.

A review the results from Appendix A, depicts that of the 45 students who experienced the anger management program, only 9 of the students scored on the low end of the scale (a score of 10 or lower), meaning they had a greater sense of internal control. In the control group of random students, 16 students scored on the lower end for a greater sense of internal control (shown in Appendix B). On the opposite end, 5 students in the subject group scored in the upper end to signify a greater sense of external control. The control group had 6 students score in the upper end for having a more external orientation. The remaining 31 students in the subject group and 22 students in the control group, scored in the middle range. Students who scored in the middle range, possibly had an external or internal orientation, depending on a specific situation they might encounter.

The data was then analyzed to determine significance by using the T Test for Independent Samples. The results from this analysis are shown in Table 4.1.

TABLE 4.1

SUBJECT GROUP		CONTROL GROUP		т	DF
Ν	45	Ν	45	1.741	88
Mean	15.310111	Mean	13.621222		
S.D.	4.491518	S.D.	4.711152		

INTERPRETATION OF THE RESULTS

The null hypothesis for this study stated that there would be no significant difference found in the measure of Locus of Control between the subject group (students who experienced the anger management program) and the control group (a random sample of their schoolmates). If we assume that the null hypothesis is true, then the difference between the subject and control group means is not significant. If we find that the alternate hypothesis is true, then the study has found that there is a significant difference in the two groups means.

To determine which hypothesis is true, an alpha level was selected to define the rejection region. In choosing an alpha level of .05, a directional test and with the degrees of freedom (88), the rejection region is 1.658. The researcher then noted to see if the *t value* is within the rejection region. This study found the *t value* to be 1.741, which did not fall within the rejection region. Since the studies *t value* did not fall within the rejection region, the research findings led to the rejection of the null hypothesis and the acceptance of the alternate hypothesis, which stated there would be significant difference between the two groups.

SUMMARY

The null hypothesis for the study stated that there would be no significant difference found in the measure of Locus of Control between the subject group and the control group. This study found that the *t-value* to be 1.741, which did not fall within the rejection region. Since the studies *t-value* did not fall within the rejection region, the research findings led to the rejection of the null hypothesis and the acceptance of the alternate hypothesis, which stated the subject group would have a significantly higher degree of external Locus of Control that the control group.

CHAPTER FIVE

SUMMARY

The purpose of this study was to consider whether students who had been identified as having anger management difficulties, have a higher degree of External Locus Control as compared to a random sample of their classmates. The participants included 45 students (18 males and 27 females) from a High School in the Northeast Region of the United States, between the ages of 14 to 19 years old and 45 students (25 males and 20 females) in the control group.

The review of literature summarized three relevant areas the researcher believed were related to the study. The three areas reviewed were how adolescents understood their own anger, the development of anger management programs for adolescents and adolescents and their Locus of Control.

The Nowicki-Strickland Internal External Control Scale for Children was used to assess the Locus of Control Orientation in the subjects. The scores from the subject group were then compared to a random sample of their classmates, who formed the control group. The results of the instrument given to the two groups was analyzed using the Independent T Test for Two Independent Samples.

The studiest value did not fall within the rejection region, leading to the

rejection of the null hypothesis and the acceptance of the alternate hypothesis of the subject group having a significantly higher degree of External Locus of Control that the control group.

DISCUSSION

The researcher did not replicate or find a very similar study of students with anger management difficulties and their Locus of Control orientation, so this study could not make a direct comparison to another's findings.

But when looking at the previous work in the field concerning adolescents, their sense of personal control and how they dealt with anger, the researcher made some comparisons with this study's findings. In the longitudinal study by Fertman and Chubb (1992), they looked at whether a short psychoeducational intervention program would effect an adolescents' sense of personal control. Their study did not find a significant difference but did find the study group moved towards a more internal orientation after the group experienced the intervention program. With the continued development of this researcher's intervention format, possibly a shift in the identified students' control orientation could be accomplished resulting in a more internal Locus of Control. This researcher's program needs to continue to incorporate into its format, the importance of accepting responsibility for ones' views and actions, instead of looking for outside influences as guiding ones' actions. This point seems to be supported by the work of Compas, Banez, Malcarne and Worsham (1991), as it was their assertion that programs should be developed to focus on increasing the individuals awareness of personal control that is obtainable over a stressful

situation.

This researcher's findings seem to coincide with the study by Nunn and Parish (1992), where students who were identified as being at risk, had a Locus of Control which was more externally oriented. Certainly the subjects in this study are considered to be at-risk for failure, as difficulties with anger and frustration did result in disciplinary actions. Like the Nunn and Parish (1992) writings, the subjects in this study were found to have more external orientation.

One final point this researcher would like to discuss, is the suggestion from two previously mentioned writings. Furlong and Morrison (1994) suggested there needs to be a collaboration between all grades levels, in the development of comprehensive violence prevention programs. Larson (1998) supported this position, by suggesting that intervention programs need to begin in the earliest grades when it comes to violence prevention efforts. This researcher would like to see the expansions of violence prevention education in the district from which he is employed, to the earlier grades. The anger management program this researcher developed, is only being utilized at the High School level, as he believes the information needs to be taught at the earliest of school years.

CONCLUSIONS

When formalizing the concept for this study, and before reviewing the previous research concerning adolescents, the researcher made one assumption based on his interactions with the students who would later partake

in this study. When the researcher developed and then implemented the anger management program, he began to meet and interact with the students in a counseling session. In the researcher discussion with the students, often what was heard from the students as an explanation for anger outburst was the cause of external forces. One student had the following explanation for hitting another classmate, "He cursed at my sister. No one does that to her. So I had to punch him."

Numerous conversation with the students who were in the anger management program, where along these lines, leading the researcher to formulate the idea of this identified group as often seeing external forces influencing their behavior. Certainly being in the counseling field for a number of years, this researcher has met with children who had a more external orientation and has seen firsthand, as research suggests, that many individuals become more internally oriented as they become older. As a result of the interactions with the students from this study, the researcher saw a more external orientation as explanation for events in the students' lives. This interaction, led to the researcher's hypothesis for the identified students as having a higher degree of external Locus of Control than a random sample of their classmates. The findings of this study, seem to reinforce the researcher's initial assumptions.

This initial assumption was incorporated and is addressed in the researcher's intervention format, as subsequent findings of this study support the need to address the students' control orientation. The research findings, seem to suggest that students who have been identified as having difficulties addressing

their anger, need to have an intervention program that will not only teach the students anger cues and problem solving strategies but to help students self evaluate situations more internally, challenging their internal reaction to an event.

IMPLICATIONS FOR FUTURE RESEARCH

One suggestion for future research would be to study the effectiveness of the researcher's anger management program. Preliminary analysis of the program has been done, but an in-depth and detailed review needs to be completed. Also to be considered, would be the effectiveness of this researchers program as compared to other intervention programs to see if one may be more beneficial than another.

In terms of the students' orientation of control and their possible difficulties with anger and frustration, the researcher suggests this study be replicated to include a larger sample to see if another study would find similar significance. The researcher is concerned about the number of subject studied, as he would have preferred to have had a larger number to study. When this research was being done, all the students who had experienced the intervention format, were approached to be part of the study. If the study was replicated with a larger sample (eventhough 90 students is a sufficient size), the researcher would be greatly assured of the findings.

As mentioned in Chapter One (ASSUMPTIONS), the researcher does believe that an adolescent's socioeconomic and/or cultural background could

have a bearing on an individuals' sense of personal control. A review of the literature concerning adolescents and Locus of Control, did not find a wealth or work on these two seemingly important factors. One study done by Chiu (1987) looked at the Locus of Control orientation in the Chinese culture as compared to the American culture. The work of Howerton, Enger and Cobbs (1993) looked at African American teens and the relationship between Locus of Control and academic achievement. But it seems further research could be done on the influence of one's cultural background and role of socioeconomic factors on ones' sense of personal control.

REFERENCES

- Aiken, P.A., Baucom, D.H. (1982). Locus of control and depression. *Journal of Personality Assessment*, 46, 391-395.
- Berkowitz, L. (1993). *Aggression: Its Causes, Consequences and Control.* McGraw Hill. New York, N.Y.
- Chiu, L.H. (1987) Locus of control differences between American and Chinese adolescents. *The Journal of Social Psychology*, 128, 411-413.
- Compas, B.E., Banez, G.A., Malcarne, V. and Worsham, N. (1991). Perceived control and coping with stress: A developmental perspective. *Journal of Social Issues*, 47, 23-34.
- Debaryshe, B.D., Fryxell, D. (1998). A developmental perspective on anger: Family and peer context. *Psychology in the School*, 35, 205-215.
- Deffenbacher, J.L. (1988). Cognitive relaxation and social skills treatments of anger: A year later. *Journal of Counseling Psychology*, 35, 234-236.
- Deffenbacher, J.L., Lynch, R.S., Oetting, E.R. and Kemper, C.C. (1996). Anger reduction in early adolescents. *Journal of Counseling Psychology*, 43, 149-157.
- Deffenbacher, J.L. and Stark, R.S. (1992). Relaxation and cognitive relaxation treatments of general anger. *Journal of Counseling Psychology*, 29, 158-167.
 Dodge, K.A. and Price, J.M. (1990). Hostile attributional biases in severely aggressive adolescents. *Journal of Abnormal Psychology*, 99, 385-392.
 Dubois, N. (1987). The norm of internality: Social valorization of internal explanations of behavior and reinforcements in young people. *The Journal of Social Psychology*, 12, 431-439.
 - 37.

Enger, J.M., Howerton, D.L. and Cobbs, C.R. (1993) Internal/external locus of control, self esteem and parental verbal interaction of at-risk black male adolescents, *The Journal of Social Psychology*, 134, 269-274.

- Feindler, E.L., Marriott, S.A. and Iwata, M. (1984). Group anger control training for junior high school delinquents. *Cognitive Therapy and Research*, 8, 299-311.
- Fertman, C.I. and Chubb, N.H. (1992). The effects of a psychoeducational program on adolescents' activity involvement, self esteem and locus of control. *Adolescence*, 27, 517-526.
- Finch, Jr., A.J. and Eastman, E.S. (1983). A multimethod approach to measuring anger in children. *The Journal of Psychology*, 115, 55-60.
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology*, 46, 839-852.
- Furlong, M.J. and Morrison, G.M. (1994). Introduction to miniseries: School violence and safety in perspective. *School Psychology Review*, 23, 139-150.
- Furlong, M.J. and Smith, D.C. (1998). Raging Rick to tranquil Tom: An empirically based multidimensional anger typology for adolescent males. *Psychology in the School*, 35, 229-243.
- Gamble, W.C. (1994). Perceptions of controllability and other stressors event characteristics as determinants of coping among adolescents and young adults. *Journal of Youth and Adolescents*, 23, 65-84.
- Glick, B. and Goldstein, A.P. (1987). Aggression replacement training. *Journal of Counseling and Development*, 65, 356-362.
- Hazeleus, S.L. and Deffenbacher, J.L. (1986) Relaxation and cognitive treatments of anger. *Journal of Consulting and Clinical Psychology*, 54, 222-

- Howerton, D.H., Enger, J.M. and Cobbs, C.R. (1993). Locus of control and achievement for at-risk adolescent males. *The High School Journal*, 76, 210-214.
- Hudley, C., Britsch, B., Wakefield, W.D., Smith, T., Demorat, M. and Cho, S. (1998). Attributions retraining program to reduce aggression in elementary school students. *Psychology in the Schools*, 35, 271-283.
- Jones, M.B., Peacock, M.K. and Christopher, J. (1992). Self-reported anger in black high school adolescents. *Journal of Adolescent Health*, 13, 461-465.
- Jory, B., Xia, Y., Freeborn, A. and Greer, C.V. (1997). Locus of control and problem solving interactions in families with adolescents. *Journal of Adolescents*, 20, 489-504.
- Kellner, M.H. and Tutin, J. (1995). A school-based anger management program for developmentally and emotionally disabled high school students. *Adolescence*, 30, 813-825.
- Kollar, M., Groer, M., Thomas, S. and Cunningham, J.L. (1991). Adolescent anger: A developmental study. *Journal of Child and Adolescent Psychiatric Mental Health Nursing*, 4, 9-15.
- Kubany, E.S., Richard. D.C., Bauer, G.B. and Muraoka, M.Y. (1992). Verbalized anger and accusatory "you" messages as cues for anger and antagonism among adolescents. *Adolescence*, 27, 505-516.
- Larson, J. (1998). Managing student aggression in high schools: Implications for practice. *Psychology in the Schools*, 35, 283-292.
- Lefcourt, H.M. (1991). *Measures of Personality and Social Psychological Attitudes*. Academic Press, Inc., San Diego, CA.
- Lester, D. (1998). Relationship between locus of control and depression

mediated by anger towards others. *The Journal of Social Psychology*, 129, 413-414.

- McClun, L.A. and Merrell, K.W. (1998). Relationship of perceived parenting styles, locus of control orientation and self concept among junior high age students. *Psychology in the Schools*, 35, 381-390.
- Moon, J.R. and Eisler, R.M. (1983). Anger control: An experimental comparison of three behavioral treatments. *Behavior Therapy*, 14, 493-505.
- Morton, T.L. and Mann, B.J. (1998). The relationship between parental controlling behavior and perceptions of control of preadolescent children and adolescents. *Journal of Genetic Psychology*, 4, 477-491.
- Nowicki, S. and Strickland, B. (1973). A locus of control scale for children.
- Journal of Consulting and Clinical Psychology, 40, 148-154.
- Nunn, G.D. and Parish, T.S. (1992). The psychosocial characteristics of at-risk high school students, *Adolescence*, 27, 435-440.
- Ortman, P.E. (1988). Adolescents' perceptions of and feelings about control and responsibility in their lives. *Adolescence*, 23, 913-924.
- Parish, T.S. and Nunn, G.D. (1986). The importance of the family in forming life values and personal values. *The Journal of Psychology*, 122, 519-521.
- Phares, E.J. (1957). Expectancy changes in skill and chance situations. Journal of Abnormal and Social Psychology, 54, 339-342.
- Rotter, J. B. (1954). *Social Learning and Clinical Psychology*, Johnson Reprint, New York, N.Y.
- Rotter, J.B. (1966) Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28.
- Weisz, J.R. (1986) Contingency and control beliefs as predictors of psychotherapy outcomes among children and adolescents. *Journal of*

Consulting and Clinical Psychology, 54, 789-795.

Zeman, J. and Shipman, K. (1997). Social-contextual influences on expectancies for managing anger and sadness: The transition from middle childhood to adolescence.*Developmental Psychology*, 33, 917-924. APPENDIX A

RAW SCORES

SUBJECT GROUP	CONTROL GROUP
#1 11	#1 6
#2 14	#2 9
#3 13	#3 7
#4 6	#4 15
#5 14	#5 16
#6 18	#6 16
#7 11	#7 13
#8 15	#8 20
#9 11	#9 19
#10 19	#10 3
#11 17	#11 9
#12 22	#12 16
#13 13	#13 14
#14 8	#14 7
#15 22	#15 9
#16 20	#16 14
#17 13	#17 14
#18 9	#18 18
#19 15	#19 10
#20 18	#20 12
#21 15	#21 18
#22 15	#22 6
#23 8	#23 7
#24 9	#24 10
#25 11	#25 17
#26 14	#26 12
#27 16	#27 13
#28 10	#28 11
#29 13	#29 12
#30 7	#30 12
#31 14	#31 22
#32 18	#32 14
#33 18	#33 16
#34 6	#34 17
#35 9	#35 12
#36 13	#36 11
#37 11	#37 10
#38 16	#38 21
#39 13	#39 22

#40	18	#40	17
#41	19	#41	11
#42	22	#42	8
#43	23	#43	6
#44	19	#44	6
#45	18	#45	10

APPENDIX B

INTERNAL CONTROL SCORES

SUBJECT GROUP		CONTROL GROUP		
#4	6	#1	6	
#14	8	#2	9	
#18	9	#3	7	
#23	8	#10	3	
#24	9	#11	9	
#28	10	#14	7	
#30	7	#15	9	
#34	6	#19	10	
#35	9	#22	6	
		#23	7	
		#24	10	
		#37	10	
		#42	8	
		#43	6	
		#44	6	
		#45	10	