ABSTRACT

Title of Dissertation: An Exploratory Study of the Effects of Humor on Depression and Hopelessness of Incarcerated Males

Stanley R. Silverman, Doctor of Philosophy, 1994

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The objective of this research was to explore the effects of humor, in the form of video-tapes of stand-up comedy performances, on the levels of depression and hopelessness of incarcerated males. The major finding was a significant decrease in baseline levels of depression and of hopelessness, as serially measured by the Beck Depression Inventory and Hopelessness Scale. The level of significance was $p<.05$.

The total population of fifty males housed in a medium-sized detention center in Baltimore County, Maryland were placed in one of two treatment groups designated as the Aggressive-Humor (A-H) and the Non-Aggressive Humor (N-A H) Groups. Each group had twenty-five members; subjects in the A-H Group saw two comedy tapes, one by Eddie Murphy and one by Richard Pryor. The N-A H Group members viewed a tape by Bill Cosby and one by Whoopi Goldberg.

Although both groups appeared to be rather homogenous, the data revealed a substantial difference in the response to the comedy tapes: on average, subjects in the A-H Group laughed approximately twice the total recorded for the N-A H Group. Notwithstanding, the Cosby and Goldberg tapes significantly decreased the depression and hopelessness of the subjects in the N-A H Group.

The responsibilities of the correctional system are broad and diverse. With crime on the rise, its obligations from either a detention or rehabilitation perspective will continue to grow. Correctional centers are charged with expanded control in monitoring behaviors of the incarcerated in groups as well as individually; the over-representation of the mentally ill who are incarcerated extends this responsibility to safe environment. By necessity, part of this goal is to decrease depression and feelings of hopelessness so prevalent among inmates. Humor emerged as an effective conduit for this objective.

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AN EXPLORATORY STUDY OF THE EFFECTS OF HUMOR ON DEPRESSION AND HOPELESSNESS OF INCARCERATED MALES

by

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DEDICATION

To my Children

and Parents

Who Let Me Sing My Song
and Dance My Dance

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This work could not have been accomplished without the love and support of many caring people.

Dr. John Eliot of the University of Maryland originally stimulated me in the academic pursuit of humor. As a teacher and advisor, his wisdom and challenges were instrumental in elevating the entire process. He was my sometimes counselor and always my friend.

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CHAPTER I

PROBLEM AND THEORETICAL BACKGROUND

At midyear 1988, there were approximately one million prisoners in the United States- with almost three million more under the supervision of parole/ probation services. This population has expanded 38 percent since 1984, and approximately one in 27 men now finds himself under some correctional supervision (US Dept. of Justice, 1989). From 1978 to 1988, the number of persons on a given day in a jail in the United States increased 117% from 158,394 to 343,569 (BJS, 1990). These numbers meant that in 1988 there were 9.7 million jail admissions, and 9.6 million jail discharges (BJS, 1990). The National Council on Crime and Delinquency projects that the prison population will rise by over 68 percent by 1994, resulting in an additional 460,000 inmates.

The correction system is responsible for over 1.3 million offenders on any given day and processes over 2.5 million admissions/readmissions yearly. These high numbers are a reflection of such things as "Stiffer laws, mandatory imprisonment for certain crimes, and determinate sentencing which precludes the possibility of parole" (Goldstein, 1983)." Although the move to decarceration in the past several years had increased the number of

incarcerated offenders by utilizing community-based corrections programs, a change in the mood of the nation toward criminals has resulted in a major increase in numbers of inmates at both the jail and prison levels" (Bernier, 1986).

The appreciation for and the creation of humor is a human phenomenon. Its uses in our lives are commonplace, and generally well-accepted. Humor allows us to deal with social taboos including sexuality; feel accepted by others and to strengthen relationships; deal with anxieties as a defense mechanism; and to escape the realities of our lives by seeing the "lighter side" of our problems and the problems of others. Recently there has been strong interest in the uses of humor in a wide range of arenas from psychotherapy to everyday applications in the home and workplace. However, little is known about the effects of humor upon a population of incarcerated persons.

Purpose

The purpose of this study was to explore the effect of humor on the severity of depression and hopelessness in a population of incarcerated males. The dependent variables were the severity of depression and hopelessness. The independent variable was humor in the form of video-tapes of stand-up comedy performances. The criterion measures were the Beck Depression Inventory and the Hopelessness scale.

This dissertation is organized in terms of five

chapters. The first chapter presents the problem and the theoretical background. The second chapter contains a rationale for the particular variables of the study and the relevant research questions. The third chapter is concerned with the methodology of the study. The fourth chapter contains the results of the study, and the final chapter includes a discussion of the results, their significance, and implications for further research.

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Part 1- The Correctional System and the Incarcerated

" The demographic characteristics of Americans who fill the jails and prisons are skewed in many ways. Most (over 90 percent) are men, many are Black; on any given day, 6 per cent of all White males in the United States and 23 percent of Black males are incarcerated or are under the supervision of the correctios system" (Young, 1990). Almost half of all prisoners (47 perecnt) are African-American; a large number

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are also young and poor." More specifically, the majority of inmates are men between the ages of 16 and 30 who have a life of aimlessness- not committed to goals of any kind" (Young, 1990). Some are entrenched in a life of crime. The characteristics that seem to dominate in this population are: severe educational handicaps, unstable work records, few or no vocational skills, poverty backgrounds, economic and social disadvantages, products of juvenile facilities, and/or histories of childhood sexual, physical, or psychological abuse.

The final product in many cases is a "Person who is angry and fearful, with low self-concept, feelings of helplessness, and hopeless of ever gaining better status. There is evidence of great difficulty in dealing with authority figures and controlling impulses, i.e., maladaptive coping mechanisms. Most have failed in a material society and have failed in any relationship with family and friends; true intimacy is an unknown experience. ....Manifestations of these characteristics include: bravado, swaggering, bragging, bullying, threats, suspiciousness, uncooperativeness, quietness, withdrawal, and/or depressive and psychotic behavior" (Bernier, 1986).

The environment plays a crucial role in affecting inmates. There is a prevailing high level of anxiety for inmates, correctional officers, and other personnel. At any

time, the offender fears violence and humiliation at the hands of caretakers or other inmates; anxiety is increased due to overwhelming court procedures. The potential for violent acts is always present in corrections settings. Assaults are usually responses to frustrating events and social stimuli. Corrections staff, in communicating with inmates, often use words of an aggressive nature that may incite or condone violence. Officer descriptions of inmates usually include such adjectives as combative, hostile, militant, bad, deadly, and assaultive. These become positively or negatively charged depending on: the values placed on the words by the user and receiver; how knowledge of the person influences perception and judgement; and what each person believes constitutes deviant behavior.

"The tension within correctional settings breeds lack of trust and feelings of aggression that ultimately lead to acts of violence. In general, aggressive behavior can be seen as a reflection of the culture in which one is reared. The high level of anxiety and relentless fear of violence are fostered by the restriction of movement and boredom of daily routine coupled with a lack of meaningful activity and dircetion. Many of these problems can not be remedied due to budget contraints, limited personnel, and public feeling that the criminal must be punished rather than rehabilitated" (Teplin, 1984).

From the moment of arrest to final sentencing, the physical and psychological stress of the incarceration process is overwhelmimg for the offender and the family." The machinery of the criminal justice system and those who operate it are a subculture of the larger society. Entrance into this subculture causes culture shock for the non-member" (Bernier, 1986). To compound the problem, various parts of the system operate differently, by separate sets of unofficial rules. Courts and court procedure are very different from prison life. If the individuals are sentenced to "do time" of under one year for a misdemeanor, they may spend that time in a jail setting. If the sentence is for a felony, individuals will serve their time in a prison. The formal and informal rules in these two types of facilities differ greatly, as do the facilities from state to state and federal system to federal system.

Whether an individual is in a jail awaiting trial or sentenced for a misdemeanor or in prison sentenced for a felony, there is usually an orientation phase upon entrance. The complexity of this phase differs among facilities and types of facilities. In a prison, the formal orientation may include psychological testing, planning a program of rehabilitation and assignment to a specific living quarter depending on special needs. Upon entrance to a jail or detention center, this orientation phase is usually not as

complex or intense. Residents (inmates) in jails generally are being held pre-trial and therefore focusing on court procedure, in many cases are releasable on bail, or are serving short sentences (for misdemeanors). Further, the environment in most jails is less settled and structured and more chaotic and disorganized than is the case in a prison setting.

"The informal orientation always takes place and is done by other inmates and occurs when the new inmate learns the 'real' rules and regulations of the subculture of the institution. These must be learned for the sake of survival. Coupled with all of these stressors are the inmate's feelings of estrangement from family and the larger community and serious worries about what is happening to those loved ones left outside" (Bernier, 1986).

Other factors impact directly or indirectly upon jail inmates as contrasted to those in prisons. Key issues include overcrowding and the high turnover rates. Currently most jails are overcrowded and many are operating under consent decrees related to overcrowding, inadequate health care, and other concerns. The function of jails necessarily dictates a short length of stay and a high turnover rate.

Many jails are now holding inmates well in excess of their rated capacity. American Correctional Association (ACA) Standards recommend that "Jails should operate at

90% of capacity to allow room for expected fluctuations in jail populations," "Nationally, jails were at 85% capacity in 1985, 96% in 1986, and 98% in 1987. The problem is more acute in jurisdictions with large populations (more than 100 inmates in the 1983 Jail Census): 108% of the rated capacity of these facilities was occupied in 1986; 111% in 1987" (Bureau of Justice Statistics, 1989).

The high turnover rate of jail populations further complicates issues. In 1988, the average stay in a jail nationally was approximately 3 days (Bur.of Justice Statistics, 1990). Annual jail admissions were nearly 36 times the average daily population" (Bur.of Justice Statistics, Report to the Nation on Crime and Justice, 1988). In 1988, there were about 53,000 transactions daily, an increase of 12.8% in one year.

Part 2- Scope of Mental Illness and Beck's Cognitive Model

The National Institute of Mental Health (NIMH) Survey of 1984 (Epidemiological Catchment Area Program) reports that the prevalence of mental illness entails the following dimensions:

Seventeen to 23% of adults surveyed had at least one disorder; rates for any disorder covered an increase from 15.4% for a one month prevalence, to 19.1% for a six-month prevalence, and to 32.2% for a life-time prevalence. 3.5%-5.8% had affective disorders including 1.5% to 2.6% with

major depressive episodes. The most common current (in one month) specific disorders included phobia (6.2%), dysthymia (3.3%), and major depressive episode (2.2%).

Further, a major depressive episode was found at a combined male-female rate of 2.2% with the female rate (2.9%) significantly higher than the male rate (1.6%). It was almost a bell-shaped distribution of rates across the first three age groups for both men and women; dysthymia the most prevalent affective disorder at 3.3%; when restricted to the diagnostic categories covered in international studies, results fell within the range reported for European and Australian studies.

Depression has been and continues to be a major health problem in the United States. Studies of current incident rates indicate 4.5% to 9.3% of adult women and 2.3% to 3.2% of adult men suffer from depression at any given time. A large-scale National Institute of Mental Health Study indicated that 9.4 million Americans suffer from depression during a typical six-month period; it is estimated that 80 million people have sought counseling for their depressive symptoms. Depression is the most prevalent major mental health problem and the most common diagnosis associated with psychiatric hospitalization.

Beck's Cognitive Model

Psychotherapeutic approaches in the treatment of depression generally are mild variations upon a few themes. Three of the more common are the biological, behavioral, and cognitive. Of all the models, the cognitive perspective is felt to hold the greatest relevance for explaining and understanding this illness.

Dr. Aaron Beck is one of the world's foremost authorities on mood disorders. Beck's early work with depressed patients suggested to him that depressed individuals see themselves as losers- inadequate persons doomed to frustration, humilitation and failure. In describing them, "People with a four-D image: Defeated, Defective, Deserted, and Deprived"(Beck, 1963). From his research, Beck developed his premise that depression involved not only behavioral, biological, and motivational factors but also cognitive. He postulated that helplessness and hopelessness represent the core experiences of clinically depressed individuals. depressed individuals. The thinking patterns of the depressed person are characterized by "A peculiar 'cognitive triad' of a negative conception of the self, negative interpretations of one's experiences, and a negative view of the future" (Beck et al, 1979). Part 3 uses descriptors of the incarcerated and the scope of mental illness, focusing on the mentally ill offender.

Part 3-Mentally-Ill Offender

There is a disturbing rate of mental illness among inmates in itself and when compared to the general population. In fact, there is supported speculation that jails have become a repository for the mentally ill. This trend is thought to be the unintended consequence of policy modifications, e.g., deinstitutionalization of the mentally ill and more stringent commitment criteria. This trend has often been referred to as the "criminalization" hypothesis: people who might have been treated in mental health facilities are instead arrested (Abramson, 1972; Lamb and Grant, 1982).

As alluded to earlier, "Boundaries between the mental health and criminal justice systems have blurred in the last ten years" (Jemelka, Trupin, and Chiles, 1989). Mental health and criminal justice professionals are particularly concerned about mentally ill people being arrested for such misdemeanors as disorderly conduct and trespassing, which are often more symptomatic of mental disorder than of criminality per se. Although American Bar Association standards state that criminals who are mentally ill should be diverted into the mental health system, in practice, they are often arrested. Teplin found "While the mentally ill suspects are no more likely to commit serious crimes than

the non-mentally ill, their arrest rate was significantly higher, 46.7% versus 27.9%" (Teplin, 1984). Criminal processing of the mentally ill may be most common among individuals of the underclass as they have less access to treatment, fewer treatment alternatives, and less social support than wealthier persons (Teplin, 1984).

Mentally ill persons with co-occurring substance abuse or anti-social personality disorders (e.g.,schizophrenics who are alcoholic) are particularly vulnerable to arrest because few placements are available for such patients. "Although a complex array of services is available in health systems, each sub-system designs programs to fit a specific need. As a consequence, patients with multiple problems are persona-non-grata to many facilities, and they may be arrested as a way to manage their disorders"(Brown, Ridgely, Pepper, et al, 1989).

Abram and Teplin's (1991) broad study found "Treating co-disordered patients is clearly problematic, but the data suggested that the needs of this population must be addressed." The rate of among their subjects was extraordinarily high: 72% of the current severely ill also had either an alcohol or drug use disorder. Lifetime disorder rates was even higher (94%). Extrapolating data to the latest jail census,395,553 detainees,(U.S. Department of Justice, 1991), it could be expected that nearly

24,000 detainees in the United States have severe mental disorders and about 17,000 of these also have substance abuse disorders. According to rates of growth (Camp and Camp, 1990; U.S. Department of Justice, 1990), jail populations will exceed 1 million persons by 1995. At that time, it could be expected that 60,000 of those detainees will have severe mental disorders and 43,000 will also be alcohol or drug dependent.

In gathering psychiatric epidemiological data, jails rather than prisons provide a more accurate base. Jail populations include detainees awaiting trial and convicted offenders serving sentences of less than one year, while prisons contain only convicted criminals serving longer sentences. "Prison samples are biased because inmates are diverted to forensic psychiatric facilities prior to conviction or imprisonment; prevalence rates of severe disorders in prisons appear to be lower than those in jails and those in the general population. Jail detainees are inproportionately young and minority group members; interestingly, these characteristics correlate with patients' with severe mental disorders. A special note is made regarding the increased trend of young adults in the population of mentally ill offenders. this younger group tends to use drugs, drop out of treatment, be more violent, and resist viewing themselves as mentally ill. These character-

istics increase the probability of their engaging in behavior leading to arrest and conviction. Also noted is the increase in the percentage of persons with a criminal history who are committed to mental hospitals. Between 1969 and 1978 the percentage of male hospital admissions with at least one prior arrest rose from 38% to 56%" (Goldstein, 1983).

Several factors increase the likelihood that an individual's unusual or deviant behavior will be dealt with by criminal justice rather than the mental health system. Jemelka, Trupin, and Chiles (1989) felt these factors included "The unavailability of long-term hospitalization in state hospitals for the chronically ill, the lack of adequate support systems for the mentally ill in the community, and expectations that police deal with deviant behavior more quickly and efficiently than the mental health system."

Teplin's (1990) study was graphic in depicting jail rates of schizophrenia, major depression, and mania: rates of these illnesses were two to three times higher than in the general population. Moreover, "These rates likely underestimate the true prevalence of the mentally ill who are processed through the criminal justice system; samples obtained at the jail level omit all persons who are arrested but not incarcerated because they are diverted to a mental

health facility during their pre-trial hearing; or who are arrested but then bail-released."

Teplin's data revealed that, "Prevalence rates for current and lifetime severe disorders (schizophrenia, major depression and mania) were significantly higher in jail samples: for current disorders, 1.24 percent to 4.52 percent than in the five-city sample; for lifetime disorders, 2.01 percent to 5.07 percent than in the five-city sample." In general, the differences in both current and lifetime rates between the jail population and five-city sample held when controlling for race and age. It is also relevant that "The observed ratio of current jail rates to current population rates is substantially higher than the comparable ratio of lifetime rates. This finding lends further ther support to the 'criminalization' hypothesis because we knew they occurred during a period of active illness. The broad finding was that over 6% of all incoming jail detainees were suffering from a'current' (symptomatic in previous two weeks) psychotic illness."

Several factors make it likely that the rates of mental illness in correctional populations will continue to increase in the future: "A lack of adequate community support, treatment, and housing for all mentally ill persons; difficulties mentally ill offenders experience in gaining access to services; the changing demographic

character of the mentally ill population; the increasing overlap found in correctional and state hospital populations; the availability of drugs in our culture; legal trends toward 'guilty-but-mentally-ill'statutes; more stringent civil commitment criteria; and the lack of advocacy for mentally ill offenders" (Jemelka, Trupin, and Chiles, 1989). The next section looks at humor, while offering an overview of current understanding and uses.

Part 4- Humor- Definitions and Uses

Numerous theories about humor and what it is date back to the Greek philosophers Aristotle and Plato. However, probably the first theory of humor came from Empedocles of Acragas (493-433 B.C.), a philosopher. Depending on the predominating humor, he believed a person was either sanguine, choleric, phlegmatic, or melancholic (Kalisch and Kalisch, 1978). Even then "humor" was felt to relate to a person's mood.

Humor is a broad-gauged, complex, and contextual phenomenon. Because of ite essential complexities (such as the processing of messages) and conditional nature (individual mood and perspective and environment), a simplified definition of humor is most difficult. Many definitions (perspectives) though, have been offered.

A great number of past and present investigators on humor feel it is a response while others conclude that it

is a process or a perspective. It's been said that "Humor is any communication which is perceived by any of the interacting parties as humorous and leads to laughing, smiling or a feeling of amusement" (Jones, 1955).." Freud felt that humor was a method of coping and inherently contained a liberating element" (Jones, 1955).

Almost all modern definitions and approaches to the phenomenon of humor understand it as a cognitive process where we take pleasure from reconciling something which is incongruous, out of synch with our expectations, and/or a psychodynamic process in which aggression, hostility, anxiety and other human emotions are rendered harmless or non-threatening.

Saper (1988) studied humorous behavior within a cognitive-behavioral or social learning framework. He saw humor as "An affective, cognitive, or aesthetic aspect of a person, stimulus, or event that evokes such indications of amusement, joy or mirth as the laughing, smiling, or giggling response."

The belief in humor's importance for good health seems to have resulted from the common experience of most people that humor is often capable of elevating us from depression or other negative mental states. It seems that one of the main characteristics of humor is that it offers a possibility of seeing things in a new and unexpected way.

Investigators have reported that cognitive involvement in humor during stress was important in reducing effects of stress; humorous imagery was effective in decreasing depression; and that the use of humor was instrumental in changing one's perspective and attitude even in the face of terminal illness.

Chapter Summary

This first chapter reflected upon the correctional system and the increasing number of incarcerated persons. Additionally, it discussed the scope and impact of mental illness while underscoring the mood disorder, depression. Part 3 centered on the mentally ill offender, fusing Parts 1 and 2. Finally, perspectives and uses of humor were discussed. In the second chapter, a rationale for each variable in the study will be presented, as well as prediction statements.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study is to explore the effect(s) of humor on the severity of depression and hopelessness in a population of incarcerated males. The theoretical background was presented in the first chapter. In this second chapter, a rationale for the variables will be developed.The independent variable is humor in the form of video-tapes of stand-up comedy performances.The dependent variables are severity of depression and hopelessness.

Organization

Part 1 discusses emotion theory while emphasizing anger and coping. It also considers confounding variables commonly found in psychological studies. Additionally, it offers an overview of attributional style and learned helplessness. Part 2 investigates depression and a sub-type, hopelessness depression; The Beck Depression Inventory and Hopelessness scale are examined. Part 3 describes the correctional setting, and looks at the mentally ill offender. Part 4 views humor and its uses and effects on stress, negative life events, anxiety, and depression.

Part 1- Emotion, Attributional Style, and Learned Helplessness

Due to the nature of this study and its emphasis on emotional processes and responses, a brief discussion of core themes, appraisal patterns, and coping processes in emotion will precede the Review of Literature. Lazarus's (1991) cognitive-motivation-relational theory of emotion will provide the basis for this review. His theory of emotion contains relational, motivational, and cognitive components,

Relational means emotions are always about person-environment relationships that involve harms (for the negative emotions) and benefits (for the positive emotions) (p. 819). Motivational means acute emotions and moods are reactions to the status of goals in everyday adaptational encounters and in our lives overall.

The third component, cognitive, means knowledge and appraisal of what happens in encounters of living. Knowledge consists of situational and generalized beliefs about how things work; appraisal consists of an evaluation of the personal significance of what is happening in an encounter with the environment (p.820). The cognitive determinants of each emotion must include the particular meaning of each emotion held by the person. Lazarus makes the important point: "We don't become emotional about unimportant things, but about values and goals to

which we have made a strong commitment." Emotions are a very different kind of adaptational process from reflexes. Emotions make possible much greater variability and flexibility than other reflexes or physiological drives.

Empathy and aesthetic reactions are clearly emotional, rather than reflexive, in character. If empathy is defined as sharing another's feelings, then it can not be a single emotion because its response characteristics depend on the emotion manifested by the other person. The shared emotion could be for example, either joy, grief, anguish or depression (the latter being a mixture of sadness, anger, anxiety, and guilt).

A similar problem applies to aesthetic emotions, which arise in response to viewing a painting or drama; having a religious experience; or making a discovery about nature. The rules relating to aesthetic emotions remain to be formulated. How is it that we react emotionally to a drama or farce? Lazarus felt that the "Aesthetic emotions include diverse emotions not a single emotion family")p.821).

In broad terms, a theory of emotion might best be considered a systems theory, encompassing a number of cause-and-effect variables and processes.
Lazarus (1991) looked at, among others, the emotions of anger and sadness as examples of his theory. Anger and sadness are negative emotions which involve loss and may

lead to feelings of helplessness. Anger, he proposed, depends on an appraisal that one's ego identity is at stake, which also implies goal relevance. In anger, blame is necessary. Goal commitments extend readily to others whom we love or to persons and social groups with whom we are identified, and also to ideas or ideologies (p.828).

The goal relevance in sadness is not specific, as it is with anger, guilt, and shame, but consists of any commitment of importance to the individual, e.g., one's social role, job, public reputation, or loved one.

An irrevocable loss of this commitment, implying helplessness or lack of control, is the goal incongruent event that produces sadness. When sadness is experienced, the person believes there is no way to restore the loss. As with anxiety, no agent is held accountable for the loss. If the person locates an external agent, the emotion will be anger, or perhaps anxiety, rather than sadness. Sadness has two other features that make it distinctive among the negative emotions. First, its action impulse is inaction or withdrawal from involvement; second, it is apt to evolve slowly with the gradual struggle to accept the loss, a process that may extend over a long time. It is noted that Lazarus treats sadness as a mood rather than as an acute emotion (pp. 829-830).

What are the psychological contexts of health and illness? Some speculate that hopefulness, activity, and optimism produce physical and mental well-being, whereas hopelessness, passivity, and pessimism make disease and even death more likely. At one extreme, consider what Norman Cousins (1977) wrote after recovering from a collagen's disease that he self-treated by literally laughing himself out of the illness:

> " I have learned never to underestimate the capacity of the human mind and body to regenerate-even when the prospects seem most wretched. The life-force may be the least understood force on earth. William James said that human beings tend to live too far within self-imposed limits. It is possible that these limits will recede when we respect more fully the natural drive of the human mind and body toward perfectability and regeneration. Protecting and cherishing that natural drive may well represent the finest exercise of human freedom" (p. 51).

At the other extreme, theorists feel that psychological factors do not play a role in determining physical health.

Peterson and Seligman (1987) conclude explanatory style seems to play a role in health and disease. This construct is one developed within the learned helplessness theory. The concept of learned helplessness has several related meanings. First, it refers to inappropriately passive behavior- people are helpless if through their inactivity they fail to control outcomes that are objectively responsive to their actions (Peterson and

Seligman, 1987). Second, learned helplessness refers to role of noncontingent events in producing passivity. It refers to the cognitive mediation of passivity. Helpless people learn during exposure to non-contingent events that outcomes occur independently of behavior. Regardless of what they do or not do, the events take place. They come to expect that future events will also be uncontrollable. This expectation leads to helpless behavior.

At the root of the learned helplessness model was an apparent need for control over the environment. According to the model, this need for control is so important that when one expects that certain events are uncontrollable, hopelessness and depression may result (Peterson and Seligman, 1987). In this model, the more internal one's attribution for lack of control is, the more that self-esteem will be lowered. Also, stable attributions produce depressive symptoms across time, whereas unstable attributions for lack of control produce time-limited symptoms. Attributions may also vary in their degree of generality: attributions that are relatively global produce a wide range of helplessness deficits, whereas specific attributions do not result in generalization of deficits across different situations. Further, the severity and intensity of depressive symptoms will vary with the perceived importance of the situation to which attributions of a lack

of control are made. Obviously, the more important the situation is, the more pronounced the depressive symptoms will be (Abramson et al. 1978).

The next section reviews depression, the Beck Depression Inventory, hopelessness theory, hopelessness depression, and the Hopelessness Scale.

Part 2- Depression, Hopelessness, Beck Depression Inventory, and Hopelessness Scale

As indicated in Chapter 1, depression has been and continues to be a mental health problem of major proportions in the United States: studies of current incident rates reveal that 4.5% to 9.3% of adult women and from 2.3% to 3.2% of adult men suffer from depression at any given time (American Psychiatric Association, 1987); it is believed that approximately 80 million people have sought counseling for their depressive symptoms; and depression is the most prevalent major mental health problem and the most frequent diagnosis associated with psychiatric hospitalization(Kaplan and Sadock, 1991).

A depressed mood and a loss of interest or pleasure are the key symptoms of depression. People say that they feel blue, hopeless, in the dumps, or worthless. For the person, the depressed mood often has a distinct quality that differentiates it from the completely normal emotion of sadness; he often describes the symptom of depression as

one of agonizing emotional pain. Approximately two-thirds depressed people contemplate suicide, and 10 to 15 percent commit suicide. Depressed people sometimes complain about being unable to cry. They are often unaware of their depression and do not complain of a mood disturbance even though they may exhibit withdrawal from family, friends, and activities that previously interested them (Kaplan and Sadock, p.364).

Almost all depressed patients (97 percent) complain about reduced energy resulting in difficulty finishing tasks, school and work impairment, and less motivation in undertaking new projects. Approximately 80 percent of people complain of trouble sleeping, especially early morning awakening and multiple awakenings at night, during which they ruminate about their problems. Many people have decreased appetite and weight loss; some have increased appetite, weight gain, and increased sleep. The latter, with symptoms accompanied by marked anxiety, are referred to as having atypical depression. Anxiety, in fact, is a common symptom of depression, affecting as many as 90 percent of depressed patients (Kaplan and Sadock, p. 368). Cognitive symptoms include subjective reports of an ability to concentrate (84 percent of all patients) and impairments in thinking (67 percent) (Kaplan and Sadock, p.368)

As alluded to earlier, the critical pathology in depression is one of mood and not of affect. Mood may be normal, elevated, or depressed. Normal persons experience a wide range of moods and have a large repertoire of affective expressions. Mood disorders are a group of clinical conditions characterized by a loss of a sense of control; they virtually always result in impaired interpersonal, social, and occupational functioning.

Beck Depression Inventory

One measure in this study is a self-report scale, the 1978 version of the Beck Depression Inventory (BDI). The BDI was developed in 1961 and revised in 1978. The 1978 version asks respondents to describe how they have been feeling during the past week, including today. The BDI was selected as the measure of depression as its items reflect Beck's emphasis on the cognitive basis for depression. This point converges with the focus of contemporary investigators on the cognitions involved in the humor response.

The BDI consists of 21 items, rated on a 4-point scale (0-3) of intensity. The primary purpose of the BDI is the assessment of the severity of depression. Ratings summed to calculate total depression scores can range from 0-63, with higher scores indicating greater severity of depression. Guidelines for interpreting the respondent's level of depression are generally agreed to be as follows: 0-9 is

no depression, 10-15 is mild depression, 16-19 is mild-moderate depression, 20-29 is moderate-severe depression, and 30 or above is severe depression.

The 21 symptoms and attitudes that are rated are: mood, pessimism, sense of failure, lack of satisfaction, guilt feelings, sense of punishment, self-dislike, self-accusations, suicidal ideas, crying, irritability, social withdrawal, indecisiveness, distortion of body image, work inhibition, sleep disturbance, fatigability, loss of appetite, weight loss, somatic pre-occupation; and loss of libido.

The BDI covers a wide range of symptoms associated with depression, including affective, cognitive, physiological, and social or behavioral.

An advantage of using the BDI is to relate new research and clinical findings to the large amount of existing research on the BDI. Post et al (1983) looked at the diagnostic efficacy of four measures of depression in adult psychiatric in-patients who met stringent criteria for major depression. Both the MMPI D scale and the Beck Depression Inventory yielded a significant difference between unipolar depressed patients and the group of patients with symptoms of depression, who did not have a major affective disorder. In this study, scores on the the BDI and the MMPI D scale but not the Hamilton Rating

Scale for Depression were significantly related to the diagnosis of unipolar major depression.

Lambert, Master, and Astle (1988) studied the Beck Depression Inventory, the Zung Self-Rating Depression scale, and the Hamilton Rating Scale for Depression in analysis of treatment effects over time. Their results indicated the BDI exhibited the strongest gains from pretest to 12 weeks, while the Zung scores and the Hamilton ratings were nearly equivalent and showed much smaller effect sizes.

Another study, by Beck and Steer (1984), investigated the 1961 and 1978 versions in two different samples of psychiatric patients. The alpha coefficient for the 598 in-patients and out-patients who were administered the 1961 version was .88; for the 248 out-patients who self-administered the 1978 version was .86. The patterns of corrected item-total correlations were also similar. The conclusion was that the internal consistencies of both were comparable. The BDI is quick and easy to administer and score. The average person can complete the BDI in about ten minutes. The reading level ranges from the sixth through the eighth grade level.

Hopelessness Theory: Hopelessness Depression

Clinicians have suggested that depression is not a single disorder but rather a group of disorders heterogeneous with respect to symptoms, therapy, and prevention (Craighead, 1980). The hopelessness theory represents a theory-based approach to the classification of a sub-set of the depressive disorders and postulates the existence in nature of hopelessness depression (Abramson, Metalsky, and Alloy, p.359). In contrast to symptom-based approaches to the classification of the depressive disorders, cause figures prominently in the definition of hopelessness depression. Overall, the hopelessness theory specifies a chain of contributory causes hypothesized to culminate in a proximal sufficient cause (an expectation that highly desired outcomes will not occur or that highly aversive outcomes will occur coupled with an expectation that no response in one's repertoire will change the likelihood occurrence of these outcomes) of the symptoms of hopelessness depression. The question needs to be asked, how does a person become hopeless and, in turn develop the symptoms of hopelessness depression?

An important advantage of the hopelessness theory is that it not only specifies a proximal sufficient cause of a sub-type of depression but also specifies a sequence of events in a causal chain. Each event in the chain is considered a contributory cause because it increases the like-

lihood of the occurrence of the symptoms of hopelessness depression. The etiology chain begins with the perceived occurrence of a negative life event. Rsearch has shown-that the occurrence of negative life events is involved in the development of depression In the hopelessness theory, negative events serve as "occasion setters" for people to become hopeless. However, people do not always become hopeless and depressed when confronted with negative life events. If inferences for negative events do modulate the likelihood of becoming hopeless, then it is important to delineate what influences the kinds of inferences people make." During the 1960's and 70's, social psychologists conducted studies showing that people's causal attributions for events are, in part, a function of the situational information they confront. People tend to attribute an event to the factor or factors with which it co-varies" (Metalsky & Abramson, 1982).

In addition to inferred consequences of negative events, Abramson, Metalsky and Alloy (1989) suggested that characteristics about the self, given these events, also may modulate the likelihood of formation of hopelessness and, in turn, the symptoms of hopelessness depression. Inferred characteristics about the self refer to the inferences a person draws about his or her own worth, abilities, personality, desirability, from the fact that a particular

negative life event occurred. Such a concept appears to be central in Beck's (1967) description of cognitive processes and depression. Inferred negative characteristics about the self should be particularly likely to lead to hopelessness when the person believes that the negative characteristic is not remediable or likely to change and that possession of it will preclude the attainment of important outcomes in many areas of life. For the occurrence of a given negative life event, the three kinds of inferences (cause, consequence, and self characteristics) may not be equally important in contributing to whether the person becomes hopeless and, in turn, develops the symptoms of hopelessness depression.

These symptoms include: retarded initiation of voluntary responses; sad affect; suicide; lack of energy; apathy; psychomotor retardation; sleep disturbance; difficulty in concentration; and negative mood cognitions (Abramson, Metalsky, and Alloy, 1989).

Needles and Abramson (1990) proposed a model of recovery from hopelessness depression that highlights the occurrence of positive events providing the occasion for people suffering from hopelessness depression to become hopeful and, in turn, non-depressed. In addition, people with a style to infer positive characteristics about the self or positive consequences

given positive events also should be likely to receive an emotional benefit when such events occur. The logic of the theory presumes that relapse or recurrence of hopelessness depression should be predicted by the reappearance of hopelessness.

A function of the hopelessness theory is to serve as an organizing rationale for the derivation of predictions about therapeutic interventions for hopelessness depression (Alloy, Clements, and Kolden, 1985). Because the hopelessness theory specifies a chain, each link may be a point for clinical intervention and further suggests points of intervention for reversing current episodes; each link can be seen as a point for decreasing vulnerability to hopelessness depression. Any therapeutic strategy that undermines hopelessness should be effective in remediating current symptoms of hopelessness depression (Hollon and Garber, 1980). Prevention efforts also might be directed toward lessening the stressfulness of events for vulnerable people.

A key prediction of the hopelessness theory is that hopelessness temporally precedes and is a proximal sufficient cause of the symptoms of hopelessness depression. A number of cross-sectional studies have examined the relation between hopelessness and depression. A feature of these studies is that they tested whether hopelessness is specific to depression, or is a more general feature of

psychopathology. Abramson, Garber, Edwards, and Seligman (1978) reported unipolar depressed patients were more hopeless than were both hospitalized non-depressed control and nondepressed schizophrenic subjects. It is interesting that the the unipolar depressive subjects also were more hopeless than the schizophrenic subjects.

Recently, Beck, Riskind, Brown, and Steer (1988) found that psychiatric patients suffering from major depression were more hopeless than patients suffering from generalized anxiety disorder and a group of mixed psychiatric patients (diagnoses other than depression or anxiety). These studies suggest that hopelessness is specific to depression and not a general feature of psychopathology. Investigators in the late 1980's, insofar as hopelessness theory is a subtype of depression, felt that it was inappropriate to simply lump together all depressive subjects and examine levels of hopelessness to test the theory. Some investigators have reported a strong association between hopelessness and suicide attempts and ideation (Petrie and Chamberlain, 1983). It is noted that many of these investigators used the Hopelessness Scale to operationally define the construct of hopelessness that makes it distinct from the symptoms of hopelessness depression.

Hopelessness Scale

Another measure used in this study is the Beck Hopelessness Scale. Before delineating aspects of this measure including psychometrics a review of the psychological construct of hopelessness, its association with depression, and arguments for its inclusion and emphasis in this study are offered.

Hopelessness, the second item on the Beck Depression Inventory referred to as pessimism, has been defined as "a system of cognitive schemas whose common denomination is negative expectations about the future" (Beck, 1974). Abramson, Metalsky, and Alloy (1989) extended Beck's definition: "The common term hopelessness captures two core elements of a proximal sufficient cause of hopelessness depression: (a) negative expectations about the occurrence of highly valued outcomes (a negative outcome expectancy), and (b) expectations of helplessness about changing the likelihood of occurrence of these outcomes (a helplessness expectancy). .thus, whereas helplessness is a necessary component of hopelessness, it is not sufficient to produce hopelessness (i.e., hopelessness is a sub-set of helplessness)."

Since the 1960's considerable work has focused on the importance of hopelessness in a variety of psychopathological conditions. Hopelessness has been identified as

one of the core characteristics of depression (Beck, 1963; Melges and Bowlby, 1969) and has been implicated in a variety of other conditions such as suicide (Beck, 1963), schizophrenia (Laing and Esterson, 1965), and sociopathy (Melges and Bowlby, 1969). In early investigations a preponderance of belief that hopelessness was simply a diffuse feeling state and consequently too vague and amorphous for quantification and systematic study (Beck, 1974). Further, Beck argued that hopelessness could be defined by terms of a system of negative expectancies concerning the person and his future life. Up to 1974 a number of measures of attitudes toward the future had been developed but had not been designed to quantify hopelessness specifically; this changed with the Hopelessness Scale.

Two sources were utilized in selecting items for the 20-item true-false Hopelessness Scale (HS). Nine were selected from a test of attitudes about the future in semantic differential format. These items were then revised to make them appropriate for the HS. The remaining eleven items were drawn from a pool of pessimistic statements made by psychiatric patients who were adjudged by clinicians to appear hopeless. Those selected seemed to reflect different facets of the spectrum of negative attitudes about the future and which recurred frequently in the patient's verbalizations. Initially, the scale was

administered to a random sample of depressed and non-depressed patients who provided their opinions regarding the relevance of the content and clarity of each statement. The scale was then appraised by clinicians regarding the face validity and comprehensibility of the items. The final format consisted of 20 T/F statements of which nine were keyed false and eleven were keyed true. For every statement, each response was assigned a score of 0 or 1, and the total "hopelessness score" was the sum of scores on the individual items. Thus, the possible range of scores was from 0 to 20.

A population of 294 patients who had made recent suicide attempts provided the data for determining the internal consistency of the HS. The internal consistency of the scale was analyzed by means of coefficient alpha which yielded a reliability coefficient of .93. All 190 coefficients in the interitem correlation matrix were significant. The same sample of hospitalized patients showed significant correlations between each item and the total HS score. The item-total correlation coefficients ranged from .39 to .76.

A population of 59 depressed patients in the psychiatric unit of the Hospital of the University of Pennsylvania was used to validate the HS by comparing it with other measures of hopelessness. At the time of ad-

mission, the correlation of the HS with pessimism on the Beck Depression Inventory (BDI) was .63 ($p<.001$); the HS correlated more highly with this item than with any other on the BDI.

Another index of validity of the HS was provided by its use as a measure in testing various hypotheses. The HS was used in serial studies, and in each case, the hypothesis was confirmed. Among those tested and confirmed were the following: (1) depressed patients have an unrealistically negative attitude toward the future, and these expectancies are reduced when the patient recovers from his depression (Vatz, Winig, and Beck, 1969); (2) seriousness of suicidal intent is more highly correlated with negative expectancies than with depression; the statistical association between suicidal intent and depression is an artifact resulting from a joint attachment to a third variable, namely, hopelessness (Minkoff, Bergman, Beck, and Beck, 1973).

Summary

Part 2 emphasized the prevalence of depression as a health problem. Additionally, hopelessness theory and hopelessness depression were delineated. The Beck Depression Inventory and Hopelessness Scale were discussed. Part 3 considers the correctional setting and the over-representation of the mentally ill who are incarcerated.

Part 3- Correctional Setting, Inmate Characteristics, and the Mentally Ill Offender

For many reasons, the subjects in this study present a new and challenging arena for the application of humor. During the last 10 years, extraordinary changes have occurred in the health of jail and prison inmates. The combination of urban decay, widespread illicit drug use, and expanding poverty-associated epidemics, has had a devastating impact on the well-being of incarcerated Americans. Prisoners now arrive at lock-up sicker than at any time in the last 50 years. There is another disturbing aspect of this transformation: the significantly increased prevalence of mental illness among jail inmates over that which is found in the general population. The mentally ill are greatly overrepresented in the criminal justice system.

Chapter 1 reflected the current numbers and projected increases of incarcerated persons in the next few years and these numbers are worth repeating.

At midyear 1988, there were approximately one million prisoners in the United States- with almost three million more under the supervision of parole or probation services. This population has expanded 38 percent since 1984, and approximately one in 27 men now finds himself under some correctional supervision (US Dept. of Justice, 1989). From 1978 to 1988, the number of persons on a given day in a

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jail in the United States increased 117% from 158,394 to 343,569 (BJS, 1990). The National Council on Crime and Delinquency projects that the prison population will rise by over 68 percent by 1994, resulting in an additional 460,000 inmates.

Several factors increase the likelihood that an individuals unuusual or deviant behavior will be dealt with by the criminal justice system rather than the mental health system. Jemelka, Trupin, and Chiles (1989) felt these factors include: the unavailability of long-term hospitalization in a state hospital for the chronic mentally ill; the lack of adequate support systems for the mentally ill in the community; and expectations that police deal with deviant behavior more quickly and efficiently than the mental health system.

Be it a local lock-up, jail or prison, correctional environments are concerned about their inmates from humane, legal, and therapeutic perspectives. The volume and transientness in the nation's jails provide a basis from which to discuss the humane and legal aspects; the interrelated therapeutic facets will be considered later in greater detail. The increased numbers of jail inmates is a reflection of the increasing crime rates and a manifestation of a lack of funding for new facilities. A burgeoning group of persons are now being incarcerated for the first time or

are being returned to facilities as part of the "war" against drugs.

These offenses may range from trespassing and vagrancy (misdemeanors), to distribution and conspiracy, to robbery and murder (felonies). Along this continuum, a correlated sub-set of mental health issues emerge. Detainees not only are often housed with neighbors and "friends," but with relatives as well. Together with low socio-economic life-styles, recidivism is fostered. Jails are generally pre-trial holding facilities, and detainees' attitudes become reflective of this "temporary" attribute. With minimum security, the flow of inmates is constant. There is a loose and social quality in a jail atmosphere for many reasons: many of the detainees know they will be released on low bail offenses; after a few days, they know they can have visitors; many know, as they are familiar with the system, that they will be released at court; and repeat offenders know the "informal" rules of the correctional setting. All of these factors, alone or in combination, influence the detainee, jail atmosphere, and criminal justice system. In addition, these influences increase tension and tend to make it difficult for authorities to provide adequate security for all inmates as well as address individual concerns.

Part 4- Humor- Definitions, Uses, and Forms

Humor comes in many colors, shapes, and sizes. It has been considered a form of communication, a response (as in sense of humor), a coping mechanism, or as a social catalyst. Its content or message may be direct or oblique, satirical, and/or filled with witticisms, puns, and sarcasm. The messages it conveys are theoretically endless depending on the intent of the creator and understanding of the receiver. It is presented in many forms, e.g., written, or verbal, or visual alone or in combination, spontaneous or scripted. Responses to it may range from mild amusement to raucous laughter, depending on the interpretation of what is heard, seen, or perceived and on the setting. Finally, the response may reflect the emotional state.

Responses to humor are very individual, in part due to our ability to process cognitively and our personalities. Notwithstanding its complexities, forms, content, or our responses, humor is considered by most contemporary accounts and research to be a cognitive process. The cognitions involved are developmental and appear to be associated with the individual's imagination, language, and intelligence.

Development of Sense of Humor

Harms, in 1943, wrote there are definite phases in

the development of a sense of humor. The "Birth of Real Humor" develops in adolescence and provides a well-spring for the inner self from what Harms calls "a deep life experience, a profound understanding of facts, especially the tragic and problematical facts of life, and a wisdom enabling one to accept them kindly and whole-heartedly" (p. 362).

Robinson's (1977) theory on its development is more detailed than Harms's and is divided into more phases. Each phase parallels the development of language. Most relevant here, at about sixteen, adult abstraction ability and an emotional maturity is seen; the young adult is usually able to understand multiple meanings of words and phrases. Robinson felt that from about this age, "Humor is a continuing, developing process long into adulthood."

As one of its most foremost researchers, Paul McGhee felt that the development of a sense of humor seems to be closely related to a child's intellectual, social, and emotional development. He also concluded that humor seems to be essentially a cognitive or intellectual experience, and that incongruity was a necessary (although not sufficient) prerequisite. He gives great attention to the importance of specific cognitive acquisitions, particularly language skills, for humor appreciation to

begin (p.38).

Whether referring to a child's or adult's response to humor, the individual's personality is a factor. Eysenck Eysenck (1969) concluded, from their study on personality traits, that personality is considered in relation to certain factors which result in four basic types: extraversion and introversion (on the social axis continuum); and emotional and stable (on the emotionality axis continuum). Ziv (1984) added a third dimension to this model- that of cognition. In Ziv's work, cognition was equated to intelligence and was considered critical in analyzing humorous responses. He felt that without this component one could not be certain how many humorous messages are being understood. Ziv's definition of humor should be noted: "Humor is a cognitive process in which incongruities and conflicts are perceived, reconciled, and understood, generating a pleasureable response by controlling or eliminating tension."

Freud viewed humor as a method of coping. For this he felt that humor has a dignity which is not found in wit. As Jones (1955)wrote of Freud's work, "Wit spares an expenditure in inhibition, comic in thought, humor in feeling. All three take us back to the state of childhood in which we were not aware of the comic, were incapable of wit and did need humor in order to feel happy in life.

Bergler (1937) said, "The differences between wit and humor also lies in the open sadism of wit. Humor is never sadistic, it serves to fend off suffering." Hein (1973) called humor the "great leveler" as its use can decrease anxiety, pain, anger and aggression.

Uses of Humor

Generally, humor is created and/or enjoyed by the person because it allows him to do many things he needs to do, to express needs in ways that are not only pleasurable but also socially accepted and valued. Specifically, Ziv (1984) spoke of five functions of humor:

> " It allows us to deal with social taboos, one of them being aggression. Society allows the expression of aggressive needs in special ways. One way is through sports; another way is through humor. The other social taboo with which humor allows us to deal is sexuality. It allows us to do this by deriving pleasure from it vicariously without encountering too much social censure. A third function of humor is the social one. Social criticism in the form of satire is one way of trying to change things for the better. Another function of humor is to deal with anxieties as a defense mechanism. Laughing at things that frighten us makes them less menacing; gallows or black humor pokes fun at illness or death. As a defense mechanism, humor is even used against ourselves; self-disparagement is considered the highest form of humor by some. The fifth function of humor is an intellectual one. We use humor to escape from the realities of our lives."

Aspects of these functions of humor will be given more attention here for two reasons:1- there is a commonly-felt need at times to disguise our use of humor

in the face of threat or stress; and 2- to emphasize humor's importance for our mental health.

Robert Lipsyte (1992) referred to "tumor" humor as a form of black humor or gallows humor, "The brave and edgy often self-mocking jokes that the oppressed, the minority, the scared tell each other to keep from crying." He feels that humor is the important part of a fighting attitude because it keeps people loose. It is not warm; it is scrappy and sometimes nasty and tasteless. " a sort of chemotherapy for the spirit "- necessary but never nice.

Carol Gill (1991) spoke about "disability humor," the kind that happens almost anywhere disabled people have a chance to congregate. It is heard in rehab wards, independent living center rap groups, disability rights demonstrations, and the bars and hallways of hotels housing the disabled. "Disability humor tends to be sarcastic, blunt (merciless might be a better word), insightful, self-effacing, and/or effacing of others. But it is at least two other things: first, it is shared. It is a joke between people who know the same language. It serves as a gesture of solidarity as satisfying as a secret handshake. It says we are in this together no matter what, and, we are entitled to laugh at things concerning us- a right denied to outsiders. Second, it is an assertion of power. In a world that still keeps most disabled people firmly in their

place, disability humor turns the tables. It suspends society's terrors and scoffs at them. Disability humor captures the truth with extraordinary poignancy, helping disabled understand better their incredibly complicated identity. It is a much needed affirmation of their worth."

Gill notes from psychology we know that humor can serve as a stress management technique. Accordingly, the humor of disabled people, like that of other minority groups often contains strong elements of anger. A growing trend is the expression of anger against people and institutions who are viewed as prejudiced and oppressive. Disability humor then becomes political.In any case, the humor expresses and relieves frustration that might otherwise build to self-destructive levels. Similarly, "Joking about their fears is a kind of self-therapy for the disabled that allows them to work through their worries and examine them from a different angle" (Gill, 1991).For all of us, laughing at problems helps to diffuse their impact through repeated confrontation while proving to ourselves we can manage in the face of fear.

Stress and burn-out are household words in the 1980's, but humor can be a powerful antidote- moving us from a "grim and bear it" mentality to a "grin and share it" way of behaving. George Burns, of television and movie fame who is in his 90's, says by using humor we can prevent

"hardening of the attitudes" (Gill, 1991).

In recent years, perhaps no other lay writer has received as much response and attention in the field of humor as Norman Cousins. From his book Anatomy of an Illness and numerous magazine articles and interviews, Cousins spoke from a subjective point of view in light of his own condition in outlining how the use of humor added not only years to his life but quality understanding as well. In excerpts from Head First: the Biology of Hope, Cousins (1990) shared his most important discoveries of the use of humor. The following are some of his insights:

> "Ten minutes of solid belly laughter would give me two hours of pain-free sleep. Since my illness involved severe inflammation of the spine and joints, making it painful even to turn over in bed, the practical value of laughter became a significant feature of treatment.
> Of all the gifts bestowed by nature on human beings, hearty laughter must be close to the top. The response to incongruities is one of the highest manifestations of the cerebral process. Surprise is certainly a major ingredient of humor. Our train of thought will be running in one direction and then is derailed by running into absurdity. The sudden wreckage of logical flow demands release. Hence the physical reaction known as laughter."

" Laughter is an internal necessity of such importance, Dr. Edmund Bergler (1956) wrote, that one of the worst insults to be hurled at another person is to say that he has no sense of humor." In a work that has become a classic in the field of psychoanalysis, Laughter and the Sense of Humor, the eminent psychiatrist establishes the principle

that "Humor serves not only the individual's health but also society at large. It is through humor that we reduce fears, along with nagging feelings of inferiority and sharpen our perspectives of groundless dangers." Bergler noted among the many categories of subjects that elicit laughter and diminish self-criticism is the act of bringing down authority momentarily and safely. In the comedy films of the Marx Brothers, The Three Stooges, Charlie Chaplin, and Laurel and Hardy, the "dethroning" of the rich and the pompous served to create laughter, relief, and pleasure during the Great Depression.

Many times humor is used unconsciously: in an uncomfortable situation to decrease anxiety, or in a more comfortable one to extend our social persona. The next section summarizes various examples to indicate humor's effects on stress, negative life events, and its physiological properties. Included are two formal studies focusing on humor as utilized with depressed patients.

The belief in humor's importance for good health is long established and seems to have resulted from the common experience of most people that humor is often capable of elevating us from depression or other negative mental states. Further, it seems that one of the main characteristics of humor is that it becomes possible to seeing things in a new and unexpected way or ways. Some

investigators have reported that the cognitions involved in humor during stress were important in reducing the effect of the stress.

Martin and Lefcourt (1983) investigated the theory that sense of humor reduces the deleterious impact of stressful experiences. In each study, a negative life events checklist was used as well as a measure of current moods to assess the impact of stress. These studies made use of different measures of subjects' sense of humor, including four scales and two behavioral assessments of subjects' ability to produce humor under non-stressful and mildly stressful conditions. In general, positive correlations were found between the number of negative events and the severity of negative moods such as depression and tension. The results of all these studies provided considerable support for the hypothesis that humor reduces the impact of stress. Five of the six measures of humor demonstrated a significant moderating effect in the relation between recent negative life events and current levels of mood disturbance. In each case, subjects with high scores on the humor measures obtained a lower correlation between life events and moods than did those with low humor scores.

Labott and Martin (1987) examined the moderating effects of emotional weeping and humor on the impact of

negative life events. They found that humor acted as a buffer-subjects reporting high humor-coping experienced fewer adverse mood effects as a function of high negative events than those reporting low humor-coping.

Humor provides a respite for each of us and allows us to view situations and/or others in less direct and threatening ways." Humor can give immediate relief from life's daily pressures and build up immunity to stress over the long haul"(Labott, Ahleman, Wolever, et al (1990). Studied were the physiological and psychological effects of expression and inhibition of emotion (weeping). They followed the work of others in the area of humor as immunoenhancing to crying. Thirty-nine women viewed sad and humorous video-tapes and either inhibited or expressed overt expressions of laughter and weeping. The humorous stimulus resulted in improved immunity, regardless of the overt laughter expressed; overt crying was immuno-suppressive, whereas the inhibition of weeping in the context of the same sad stimulus was not. Moods were more negative following the sad stimulus and in the expression condition.

The idea that humor may be a defense mechanism against stress, fear, or anxiety has been expressed by a number of authors. Evidence that humor indeed reduces stress and anxiety, however, is relatively sparse and inconsistent.

Humor materials in which death-related themes occur have been termed "black humor" or "gallows humor." Robinson (1977) notes, "In times of tragedy, crisis, and death, humor is a technique for neutralizing this emotionally charged area. ... Humor serves a very useful purpose in dealing with painful realities of illness or threats of disability or death."

Nezu, Nezu, and Blissett (1988) in a prospective analysis found that one's sense of humor served as a moderator of stress for depressive symptoms. Nussbaum and Michaux (1963) used humor and laughter to test severity of depression and the progress of recovery in their patients but did not test to see if humor itself had an effect.

Danzer, Dale, and Klions (1990) studied the use of humor to counteract induced depression. In testing their hypothesis, 38 female undergraduates were shown depressive slides and then assigned to one of three groups. One group heard a humorous audiotape, the second group heard a non-humorous tape, while a third waiting control heard no tape. The Multiple Affect Adjective Check List, administered before and after slide and tape presentations, showed depression induction was successful. Only the humor group decreased depression scores to the pre-experimental baseline, although both the humor and waiting groups showed signifi-

cant decreases in depression scores after the treatment. Additionally, that depressed subjects became less depressed during depression-induction seems to indicate that the depressed subjects processed the information differently or attributed the slides to different cognitive processes than did the nondepressed subjects in the main experiment. Humor, in some form and when used carefully, may be useful in the treatment of depressed patients whether to release the person's tensions or to expand his/her insight.

Baren (1974) showed exposure to a filmed or live aggressive model increases aggression in anger-aroused subjects. The results of this and other studies are consistent with the view that when a person's arousal state is anger, the anger acts as a determinant of aggression, which is directed primarily toward the goal of injuring the source of the anger state.

Zillman (1971) angered subjects before they observed an erotic film (devoid of aggression) an aggressive film, or a control film. Zillman found that subjects' physiological arousal and aggression were greater in the erotic film than in the aggressive film,and greater in the aggressive film than in the control condition. This result indicated that the effect of anger on aggression was increased by arousal induced by the erotic film.

Summary

Part 4 attempts to clarify humor's complexities by reflecting on its developmental aspects. The uses of humor were emphasized; first broadly, and them more specifically by researchers Lipsyte, Gill, and Cousins. Part 4 also provided an introduction to humor's psychological and physiological effects on emotion. Several studies in the 1980's and 1990's were described: Martin and Lefcourt- humor's effects on stress; Labott and Martin- humor's impact on negative life events; and Danzer, Dales and Klions- on humor's impact on depression.

The next section sets forth prediction statements salient in this exploratory research. The content suggests the attainable impact of humor, in the form of comedy tapes, on the levels of depression and hopelessness of the subjects.

Prediction Statements

1. Comedy tapes will decrease the levels of depression in the members of the Aggressive-Humor (A-H) Group.

2. Comedy tapes will decrease the levels of hopelessness in the members of the Aggressive-Humor (A-H) Group.

3. Comedy tapes will decrease the levels of depression in the members of the Non-Aggressive Humor (N-A H) Group.

4. Comedy tapes will decrease the levels of hopelessness in the members of the Non-Aggressive Humor (N-A H) Group.

Definition of Terms

In this study, the following definitions and/or descriptors will be applied or used:

Affect- is the subjective and immediate experience of emotion attached to ideas.

Aggressive-
marked by forceful energy or initiative; used synonymously with contentious in this study to describe the approach to comedy of Eddie Murphy and Richard Pryor; refers to the" aggressive humor" treatment group.

Depression-
a condition of general emotional dejection and withdrawal; sadness greater and more prolonged than that warranted by any objective reason. Operationally, indicated by a score of 20 or above on the Beck Depression Inventory.

Depressive disorder-
the essential feature of this disorder is one or more periods of depression without a history of either manic or hypomanic episodes; there are two depressive disorders: Major Depression, in which there is a history of a depressed mood more days than not for at least two years and in which, during the first two years of the disturbance, the condition did not meet the criteria for a Major Depressive episode (See below).

Dysthymia- (or Depressive Neurosis)-
the essential feature here is a chronic disturbance of mood involving a depressed mood for most of the day more days than not, for at least two years; during these periods of depressed mood, some of the following symptoms are present: poor appetite or over-eating, insomnia or hypersomnia, low energy or fatigue, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness; there must be a two year period in which the person is never without depressive symptoms for two months.

Hopelessness-
a system of cognitive schemas whose common denomination is negative expectations about the future. Operationally, indicated by a score of 6 or above on the Hopelessness Scale.

Humor-
a form of communication which is cognitive and can be initiated externally by verbal, visual, and/or written means, or internally by memory and evokes indications of amusement or joy; the faculty of perceiving what is amusing or comical.

Incarcerated-
refers to inmates or residents legally confined to jail or prison.

Jail- a building for the confinement of persons held in lawful custody; used synonymously with detention center.

Major Depressive Episode-
the essential feature is a depressed mood or loss of interest or pleasure in all, or almost all, activities, in addition to symptoms such as appetite disturbance, change in weight, sleep disturbance, psychomotor agitation or retardation, decreasing energy, feelings of worthlessness, or excessive or inappropriate guilt, and recurrent thoughts of death, or suicidal ideation or attempts; the associated symptoms last at least a period of two weeks.

Mood-
refers to sustained emotional states that color the whole personality and psychic life; it is a pervasive or prevailing emotion that affects the total personality; it generally involves either depression or elation; may be of a chronic or episodic nature.

Mood disorder-
a diagnostic category in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM III-R); the essential feature is a disturbance of mood that is not due to any other physical or mental disorder; disturbance of mood is accompanied by related cognitive, psychomotor, psycho-physiological and interpersonal difficulties.

Non-aggressive- in relational terms, refers to the comedy approach of Bill Cosby and Whoopi Goldberg; refers to the "non-aggressive" treatment group.

Prison- an institution for the imprisonment of persons convicted of serious crimes.

Chapter Summary

Part 1 gave an overview of Lazarus's theory of emotion, attributional style, and learned helplessness. Part 2 offered an investigation of depression and a sub-type, hopelessness depression. The two measures used in this study, the Beck Depression Inventory and the Hopelessness Scale were then examined in detail. Part 3 described the correctional setting and the mentally ill offender. Part 4 viewed humor and its uses and effects on stress, negative life events, anxiety, and depression. Following this, the prediction statements formulated for the research were offered. The last section in Chapter 2 was a listing of Definition of Terms applied and/or used.

CHAPTER III

METHODOLOGY

The purpose of this study was to explore the effects of humor on the severity of depression and hopelessness in a population of incarcerated males. This chapter on experimental procedure will be organized in terms of a description of the procedure, the instruments, the testing setting and the scoring system. All of the instruments and forms that were used are shown in Appendices A-E.

Procedure- Orientation, Qualifying Criteria, Groups

Notices were posted in the fourth floor sections of the detention center in order to solicit inmates who were interested in participating in the study. Those who volunteered were oriented to the nature and purpose of the research in groups of ten to twenty in a classroom. The basic package, as shown in Appendices A-E, consisted of the Consent Form (Appendix A), Idiographic Profile (Appendix B), Eysenck Personality Inventory (Appendix C), Beck Depression Inventory (Appendix D), and the Hopelessness Scale (Appendix E) and were completed at the orientation sessions.

Subjects were given the following verbal instructions, the content of which were identical to those included on the Consent form and reflected in the instruments used:

"There needs to be additional, effective treatments for depression and hopelessness; this research considers the use of humor. You have volunteered to be in a study here at the detention center which will look at the effects of humor on depression and hopelessness. the form of humor is film; specifically, stand-up comedy routines. You will be given a personality inventory, an information profile, and depression and hopelessness measures to complete, in addition to a consent form. If you qualify, you will be placed in one of two groups and the first comedy tape by [Eddie Murphy/Richard Pryor or Bill Cosby/Whoopi Goldberg (depending on your group)] will be shown. Each viewing will be done individually with the study investigator in the classroom. Each tape will last one hour; each of you will be audio-taped while watching the tape in order to record your responses. After viewing the first tape, you will be asked again to complete the Beck Depression Inventory and the Hopelessness Scale which shortly you will do for the first time. On the following day, the second tape will be viewed according to the same procedure. Again, the Beck Depression Inventory and the Hopelessness Scale will be completed. At that time the study will end. the data will be analyzed on an individual basis and by group.

The entire study will last about five days and provide important information concerning the effects of humor on the level of depression and hopelessness.

You will be allowed to ask questions if you are confused or need clarification regarding any procedural aspect of the research. If you begin the study and then decide to drop out, you will give the test materials to the investigator, and be returned to your section. You will receive no remuneration for your participation; your reward will be helping to improve our ability to evaluate and treat depression. A letter indicating your participating will be placed in your file at BCDC. Thank you for participating in this research."

The subjects who were oriented at this time were given every opportunity to ask questions about any item which they did not understand. Further, if they had any difficulty reading any part of the basic package, it was read to them. (This was necessary in only one case; however, this subject could not complete the study due to a transfer to another correctional facility).

Qualifying criteria

The Idiographic Profile (IP), Beck Depression Inventory (BDI), and Hopelessness Scale (HS) were administered to as many interested residents until fifty had met the qualifying criteria.

The information and scores on the Idiographic Profile, Beck Depression Inventory, and the Hopelessness Scale were used to determine whether the person qualified as a subject. As to the Idiographic Profile (IP), the following criteria were met: the resident did not have: a recent history of psychiatric in-patient admissions or out-patient therapy or counseling; current treatment with psychotropic medication; a history of depression, schizophrenia, or bipolar disorder; a recent history of being abused; a history of drug or alcohol use/abuse (unless the last ingestion was at least two weeks prior); or had a recent head injury or was receiving anti-convulsants.

In addition, the resident had to score at least a ten on the Beck Depression Inventory (BDI) and a one on the Hopelessness Scale (HS) . If the potential subject other-wise qualified on the BDI and HS, but the Idiographic Profile indicated a questionable history, the investigator ascertained further details from the resident. These details determined if the resident qualified. Having met the minimums on the BDI and HS along with information reported on the Idiographic Profile, the resident became a subject in the study. These qualifying BDI and HS scores served as baseline levels of depression and hopelessness (BDI1 and HS1). Folders with the completed forms were taken by the investigator to the viewing room to place the subjects into two groups: the first, third, fifth, etc. to the 49th subjects were placed in the "Aggressive-Humor" (A-H) Group, while the second, fourth, sixth, etc. to the fiftieth subjects were placed in the "Non-Aggressive" Humor (N-A H) Group.

Group Placement

The twenty-five subjects in the "Aggressive" humor group watched two comedy tapes, one by Eddie Murphy and the other by Richard Pryor. The twenty-five subjects in the "Non-aggressive" humor group also watched two comedy tapes, one by Bill Cosby and the other by Whoopi Goldberg.

Instruments

Idiographic Profile

Each subject participating in this study completed an idiographic profile which included the following: detention center identification number, race , age, and educational level; Legal- current charge, court date/ if sentenced, the number of days/months into the sentence, prior arrests/ convictions, incarcerations; Psychiatric- previous in-patient admission(s) with dates, previous out-patient therapy/counseling with dates/age, previous and current treatment with psychotropic medication, history of depression, Bipolar Disorder, or Schizophrenia; Family- history of abuse, living situation (homeless; lives with whom), number of visits received in past two weeks, marital status; Social- history of drug or alcohol use/abuse with approximate date of last ingestion; and Medical- history of head injury, seizures.

These descriptors are relevant to the subjects either individually or in combination. The review of literature indicated that these characteristics are commonalities of incarcerated persons in jails or prisons. Further, many of these attributes are utilized in studies of the etiology and foundations for criminality and incarceration.

Beck Depression Inventory (BDI)

One criterion measure in this study was a self-report

scale, the 1978 version of the Beck Depression Inventory. The 1961 version asks respondents to describe how they feel today or right now. In contrast, the 1978 version asks respondents to describe how they have been feeling the past week, including today. Also, the latter version differs from the original in that it contains a simpler format and easier line statements.

The BDI consists of 21 items, rated on a 4-point scale (0-3) of intensity. The primary purpose of the BDI is the assessment of the severity of depression. Ratings total to calculate total depression scores, which can range from 0-63, with higher scores indicating greater severity of depression. Guidelines for interpreting the respondents' level of depression are generally agreed to be as follows: 0-9 is no depression, 10-15 is mild depression, 16-19 is mild-moderate depression, 20-29 is moderate-severe depression, and 30 or above is severe depression.

Hopelessness Scale (HS)

A second measure used in this study is the Hopelessness Scale (HS). The HS was the first scale used to quantify hopelessness. It is a 20-item true-false test with nine items keyed false and eleven keyed true. For every statement, each response is assigned a score of 1 or 0; the total "hopelessness score" is the sum of the scores on the individual items. The possible range of scores was 0-20.

Eysenck Personality Inventory

In order to increase instrument validity, a baseline measure of personality will be administered to each subject in the study. This measure was the Eysenck Personality Inventory (EPI). The EPI measures extroversion and neuroticism, the two dimensions of personality which account for most personality variance. Eysenck and Eysenck (1969) concluded that personality should be considered in relation to four central factors constituting the end points of two axes. In describing their four basic personality types, the Eysencks noted that they correspond to the types delineated by Hippocrates.

The Hippocratic types were based on the theory that a person's health and character were a function of the combination of the "humors" or fluids in the body (origin of word humor). An excess in any one of the four humors (blood, black bile, yellow bile, and phlegm) was thought to give rise to a specific kind of temperament: blood to a "sanguine" temperament, characterized by self-confidence, cheerfulness, and sociability; black bile to a "melancholy" one, tending toward depression and pessimism; yellow bile to a "choleric" one, irritable and aggressive; and phlegm to a "phlegmatic" one, passive and apathetic.

Most personality variables can be described and relate to one another through the use of two axes. One of these is

the social axis-the continuum for a person's relations to others. The Eysencks use the terms extroversion and introversion for the end points of this continuum. Extroverts seek relationships with others, while introverts avoid. Most people are located somewhere in the middle of this axis, with one tendency more or less dominant, as in a normal distribution. What are the personality traits of those on the "extroversion" end of the continuum?

The typical extrovert is very sociable, with many friends and a need for social interaction. He/she likes parties and noise, is eager for stimulation, takes chances, and acts impulsively; he generally feels good, is optimistic, quick to react, active, and inclined to be aggressive.

What about the introvert? He is usually quiet and rather closed in himself, preferring books to people, shying away from social contact other than with close friends. He is inclined to be introspective, makes long-term plans, and does not react impulsively. The introvert does not readily express emotion or lose his/her composure; he/she is arther pessimistic and avoids large, noisy social occasions.

The Eysencks second continuum concerns man's emotionality. At one end of the scale is the extremely emotional person; at the other is the very stable one. The Eysencks

labeled the highly emotional pole neuroticism- because of the pathological connotation however, others prefer to call the two extremities of the emotional axis stability and emotionality. As with extroversion and introversion, most people are distributed around the midpoint of this axis. The emotional type expresses his/her feelings openly; his/her moods change quickly, is easily hurt and is prone to anxiety. The stable type is the opposite: he/she is of a cold temperament, does not show when he/she is hurt, and remains calm even in situations of stress; and his/her feelings, whether of love or hate, are not easily read.

As to the EPI itself, the test is a 57-item paper-pencil yes-no inventory measuring two dimensions of personality. A Lie scale provides for detection of response distortion. Scores are provided for three scales: E- Extraversion, N- Neuroticism, and L- Lie. The test is self-administered and can be completed in 10-15 minutes; scoring can be and will be done by hand.

Test-retest reliabilities for the EPI are between .84 and .94 for the complete test, and between .80 and .97 for the separate forms. Split-half reliabilities are from .74 to .91 (Eysenck and Eysenck, 1969). As to concurrent validity, the E scale correlated .79 with the Guilford Rhathymia scale and the N scale .92 with the Cycloid Disposition scale (Eysenck and Eysenck, 1969).

Procedure- Viewing Comedy Tapes

The setting for this exploratory study was a medium-sized suburban detention center in Maryland. The viewing of the comedy tapes was in a classroom on the fourth floor of the detention center. This location provided a quiet, somewhat secluded area where the subjects could concentrate on the tapes.

The investigator went to the subject's housing section and brought him to the classroom for the session. Viewing of the tape was done individually in a room measuring approximately ten by twelve feet. Each subject was placed in a comfortable (padded) chair about two to three feet in front of a 21-inch television set. An audio-casette player was placed in front of the subject; each was told that there would be no interaction with the investigator while the tape was shown. At this time, the subject was given the opportunity to ask any questions.

After inserting the tape, the investigator sat about four feet behind and to the left of the subject, in order to eliminate distraction. Each session was uninterrupted except for occasional center announcements heard through a ceiling speaker. These announcements did not appear to divert the subjects' concentration to any great degree. Viewing sessions revolved around center activities, e.g.,

meal and visitor times, Narcotics and Alcoholics Anonymous meetings, as well as "lock-down" periods (either at shift change or as a result of special incidents on the sections) when all of the residents were required to be in their cells on their sections. these factors delayed some of the subjects' viewing their first tape, but the gap did not extend beyond two days after the subjects completed the qualifying test package. the activities also resulted in the subjects' viewing tapes at different times, e.g., some saw their first tape in the morning (not before 8am) and the second tape in the evening (not after 10pm).

For the subjects in the N-A H Group, Whoopi Goldberg's "Fontaine... Why Am I Straight?" and Bill Cosby's "Bill Cosby at 49" were shown. Goldberg's presentation was in the character of a long-time drug addict who is only straight now after using hard-core drugs for twenty years. She views America as it was in the 1980's with satirical sketches of televangelists, Nixon, Reagan, AIDS research, and of other celebrities of the past fifteen or twenty years. Profanity and references to race were interspersed throughout the routine in the character of Fontaine.

In "Bill Cosby at 49," the comedian reflected upon changes in himself as he has grown older. He included physical changes, from hair loss to changes in his vision, memory and thinking. He spoke too, about husbands and wives

and looked at how, in their own ways his parents related to each other. Known for his softer humor in story-line fashion, Cosby maintained this type of presentation. There was no use of profanity or references to sex or race. Overall, Cosby's routine offered a degree of balance to Goldberg's for the subjects in the N-A H Group.

The two tapes seen by the subjects in the A-H Group were Eddie Murphy's "Delirious" and Richard Pryor's "Live in Concert." In his presentation, Murphy looked at homosexuality, relationship issues, and racial situations. In addition, he frequently reflected upon his childhood in terms of boyhood activities and his relationships with his mother and father. His ability to do impressions, use a change in voice or posture added to the comedy. His reputation of using racial slurs and profanity was evident.

As the most experienced stand-up comedian of the four, Richard Pryor offered his audience a great variety of issues including health, sex, race relations, animals, adult relationships, parenting, nature, and drug use; many of his reflections came from his own experiences and tribulations. His style was similar to Murphy's, in his connection with the audience, his use of profanity and the references to race. His style is very animated in facial expression and body movement.

Scoring of Measures

The Laughter Chart (Appendix F) was completed by both the investigator and each subject. While the tape was being viewed, the laughs heard were manually noted in the upper portion of the form by the investigator. Immediately following the viewing, the subject was given the opportunity to note his reactions to each tape in the Narrative/Comment section of the Laughter Chart. In addition, each viewing session was recorded on audio-casette. After this, the subject was given the BDI and HS with the verbal directive to complete the forms immediately upon returning to his section. The investigator returned the resident to his section and retrieved the next subject.

Retrieval and interpretation of information on the Idiographic Profiles (IP) as well as the scoring of the Beck Depression Inventory (BDI), Hopelessness Scale (HS), and Eysenck Personality Inventory were handled by the study's investigator. These tasks were done on the same day the forms were turned in by the resident.

Data Analysis

Correlational matrices, multiple analysis of variance (MANOVA), analysis of variance (ANOVA), and t-tests were applied. The statistical model for this study was a 2 (Aggressive-Humor and Non-Aggressive Humor groups) x 2 (Beck Depression Inventory and Hopelessness scale

measurements) x 3 (test 1, test 2, and test 3 repeated measures) design.

Chapter Summary

The methodology utilized in the research was described in this chapter. The data generated is detailed in Chapter 4, Findings.

CHAPTER IV

FINDINGS

The purpose of this study was to explore the effects of humor on the severity of depression and hopelessness in a population of incarcerated males. The independent variable was humor in the form of video-tapes of stand-up comedy performances; the dependent variables were the levels of depression and hopelessness.

Organization

This chapter is organized in the following manner: quantitative findings and testing of the prediction statements are presented first along with the appropriate data tables; following this are the qualitative dependent and independent variable outcomes.

Data Analysis

Correlational matrices, multiple analysis of variance (MANOVA), analysis of variance (ANOVA), and t-tests were applied. In part, this study relied on time-lagged correlations or, more properly, cross-lagged panel correlations. In a time-lagged correlation design, the pattern of correlation between two variables over time can be examined by measuring the two variables at different times. This allows some inference regarding cause and effect even though the correlational method is used. The focus of interest becomes the relationship between each variable at

time 1 (here it is at BDI1) with the other variable at time 2 (HS1), etc., etc. The statistical model for this study was a 2 (Aggressive-Humor and Non-Aggressive Humor groups) x2 (Beck Depression Inventory and Hopelessness Scale measurements) x3 (test 1, test 2, and test 3) repeated-measures) design.

General Data

Table 1 below shows a comparison of idiographic data between the Aggressive-Humor (A-H) Group and Non-Aggressive (N-A H) Group in raw data and percentage forms. There was a greater percentage of black subjects in the A-H Group (68% to 44%); subjects in the N-A H Group on the average were older (32.72 to 28.04 years); there was a greater percentage of single subjects in the A-H Group (84% to 68%); one subject in the entire population lived alone; 16% of the subjects in the A-H Group and 20% of the N-A H Group members reported they had been abused; and 72% and 76% of A-H and N-A H Group members respectively, reported a history of drug use/abuse; 56% for both groups reported alcohol use/abuse.

Table 2 is a summary of the subjects' responses on the Idiographic Profile and their responses (number of laughs) to the comedy tapes. Included are the means, standard deviations, and minimums and maximums where applicable.

Table 1
Comparison of Between-Group
Idiographic Profile Data

	A-H Group		N-A H Group	
	# Subj.	Perc.	# Subj.	Perc.
Race: Black	17	68%	11	44%
Cau	8	32%	14	56%
Educ. (grade)	11.22		10.96	
Current Charge:				
Misde.	7	28%	9	36%
Felony	10	40%	10	40%
Both	5	20%	4	16%
DNR*	3	12%	2	8%
Mean Prior Arrests:	7		14	
Mean Prior Convict.	3		6	
Mean Prior Incarcer.	3		3	
Psy. Adm.: Yes	2	8%	4	16%
No	23	92%	20	80%
DNR*			1	4%
Psy. O/P.: Yes	8	32%	2	8%
No	17	68%	22	88%
DNR*			1	4%
Psy. Rx. H/O:				
Yes	2	8%	1	4%
No	23	92%	24	96%
Psy. Hist. Yes	2	8%	0	0%
No	22	88%	25	100%
DNR*	1	4%		
Marital Status**: S	21	84%	17	68%
M	2	8%	3	12%
D/S	2	8%	4	16%
Other	0	0%	1 (Wid.)	4%
Living Sit.*** H	3	12%	5	20%
Alone	0	0%	1	4%
Fri.	5	20%	5	20%
Fam.	17	68%	14	56%

Table 1 (cont'd.)

	A-H Group		N-A H Group	
	# Subj.	Perc.	# Subj.	Perc.
Child.: No	12	48%	9	36%
Yes	13	52%	16	64%
(Aver. #)	2		2	
Abuse: No	21	84%	18	72%
Yes	4	16%	5	20%
DNR*	0	0%	2	8%
Type: Phys.	1		3	
Sex.	1		1	
Both	2		0	
No Indic.	0		1	
Aver. # Visits in last 2 wks.	1		1	
Drug Use/ Abuse: Yes	18	72%	19	76%
No	7	28%	6	24%
Alcohol Use/Abu.:Yes	14	56%	14	56%
No	11	44%	11	44%
Medical:				
No known	24	96%	24	96%
Seizures	0	0%	0	0%
Head Inj.	0	0%	1	4%
Seiz./H.I.	1	4%	0	0%

Notes-
*DNR- Did Not Respond

** Marital Status- S=single, M=married, D/S=Divorced or separated

***Living Situation- H=homeless, Fri.=lives w/ friends, Fam.=lives w/family

Table 2
Idiographic Profile and Humor
Responses of Tested Population

Variable	Mean	SD	Minimum	Maximum	N
ID	791747.90	309869.31	26458	933661	50
LM	114.60	79.91	11	345	25
LP	114.60	88.93	14	350	25
LC	71.76	88.33	0	360	25
LG	69.52	84.17	0	350	25
BDI1	20.52	7.56	10	36	50
HS1	7.40	6.07	0	20	50
BDI2	16.84	8.07	3	35	50
HS2	6.50	5.33	0	20	50
BDI3	13.56	8.80	0	35	50
HS3	5.54	5.05	0	20	50
Race	1.44	.50	1	2	50
Age	30.38	8.16	19	52	50
Educ	11.16	1.09	9	13	50
Employ	.74	.57	0	2	47
Charges	1.84	.74	1	3	45
PA	10.56	18.23	0	107	45
PC	4.39	8.39	0	48	44
PI	2.60	4.75	0	30	45
INPAT	.12	.33	0	1	49
OUTPAT	.20	.41	0	1	49
MEDS	.06	.24	0	1	50
HIST	.04	.20	0	1	49
MSTAT	1.38	.73	1	3	50
LS	3.26	1.10	1	4	50
CHILD	.58	.50	0	1	50
NUMKIDS	1.34	1.51	0	5	50
ABUSE	.19	.39	0	1	48
DU	.74	.44	0	1	50
AU	.56	.50	0	1	50
MEDICAL	.10	.42	0	2	50

Notes:

ID=identification number;LM=laughs Murphy;LP=laughs Pryor;LC=laughs Cosby;LG=laughs Goldberg;BDI=Beck Depression Inventory;HS=Hopelessness Scale;Race=1-Black, 2-Cauc,3-Other;Employ=1-yes,2-no;Charges=1-Misdemeanor,2-Felony;PA=prior arrests;PC=prior convictions;PI=prior incarcerations;INPAT=in-patient admissions;OUTPAT= out-patient treatment;MEDS=psychotropic medication;HIST= diagnostic history;MSTAT=marital status-1-single,2-married,3-divorced or separated,4-other;LS=living situat-ion-1-homeless,4-lives w/family;ABUSE=history of abuse,0-no,1-yes;DU=drug use/abuse,0-no,1-yes;AU=alcohol use/abuse, 0-no,1-yes;MEDICAL=0-no known medical condition,1-seizures, 2-head injury.

Results of Beck Depression Inventory (BDI) in raw score and categorical forms and Hopelessness Scale (HS) testing for the subjects in the Aggressive-Humor (A-H) are shown in Table 3; baseline (pre-tape viewing) BDI1 & HS1 measures and progressive test results are included. In addition, differences in the serial test results are also shown. Baseline BDI scores in the A-H group placed the subjects in the following categories of depression: 8- mild; 6- mild to moderate; 5- moderate to severe; and 6- severe. Table 4 shows the same information for the Non-Aggressive (N-A H) Group: 8- mild; 3- mild to moderate; 9- moderate to severe; and 5- severe.

Between-group ratios as to serial-testing are as follows: baseline BDI scores in the A-H group compared to the N-A H group is 20.48:20.56; the baseline HS,7.08:7.72. The BDI #2 ratio is 16.68:17.00; HS #2 is 5.36:7.64. The BDI #3 ratio for the two groups is 13.76:13.36; the HS #3, 5.12:5.96. There is a decrease in BDI #3 as contrasted with the baseline BDI for both groups: the change for the A-H group is 6.72; for the N-A H group, it is 7.08. Overall, there was a change, in categories of depression, from moderately-severely depressed to mildly depressed for both groups.

Table 3

Aggressive Humor (A-H) Group
Beck Depression Inventory (BDI)
and Hopelessness Scale (HS)
Results

	Base-line (a)		Test #2 (b)		Gain Score (a&b)		Test #3 (c)		Gain Score (b&c)		Net (a&c)	
Sub.	BDI	HS	BDI	HS	BDI	HS	BDI	HS	BDI	HS	BDI	HS
1	19	7	18	4	-1	-3	9	2	-9	-2	-10	-5
2	13	13	34	7	+21	-6	30	12	-4	+5	+17	-1
3	31	1	23	14	-8	+13	22	14	-1	0	-9	+13
4	10	3	28	1	+18	-2	1	0	-27	-1	-9	-3
5	36	20	18	7	-18	-13	17	9	-1	+2	-19	-11
6	30	20	20	16	-10	-4	17	10	-3	-6	-13	-10
7	19	3	21	2	+2	-1	17	3	-4	+1	-2	0
8	30	18	8	8	-22	-10	4	11	-4	+3	-26	-7
9	10	0	4	0	-6	0	6	0	+2	0	-4	0
10	21	6	30	4	+9	-2	23	1	-7	-3	+2	-5
11	14	4	15	2	+1	-2	15	2	0	0	+1	-2
12	32	19	33	20	+1	+1	32	20	-1	0	0	+1
13	15	5	11	0	-4	-5	6	0	-5	0	-9	-5
14	15	3	6	3	-9	0	19	6	+13	+3	+4	+3
15	17	7	11	6	-6	-1	8	6	-3	0	-9	-1
16	22	6	16	9	-6	+3	18	9	+2	0	-4	+3
17	12	1	11	2	-1	+1	9	2	-2	0	-3	+1
18	16	5	18	3	+2	-2	11	2	-7	-1	-5	-3
19	26	3	15	0	-11	-3	6	0	-9	0	-20	-3
20	11	2	5	2	-6	0	2	1	-3	-1	-9	-1
21	16	6	19	6	+3	0	23	1	+4	-5	+7	-5
22	33	8	25	10	-8	+2	24	9	-1	-1	-9	+1
23	19	10	12	3	-7	-7	6	1	-6	-2	-13	-9
24	20	2	8	3	-12	+1	11	5	+3	+2	-9	+3
25	25	5	8	2	-17	-3	8	2	0	0	-17	-3
M=	20.48	7.08	16.68	5.36	-3.80	-1.72	13.76	5.12	-2.92	-0.24	-6.72	-1.96

Notes-

Levels of Depression:
0-9: no depression
10-15: mild depression
16-19: mild-moderate depression
20-29: moderate to severe depression
30+: severe depression

Table 4

Non-Aggressive Humor (N-A H) Group
Beck Depression Inventory (BDI)
and Hopelessness Scale (HS)
Results

	Base-line (a)		Test #2 (b)		Gain Score (a&b)		Test #3 (c)		Gain Score (b&c)		Net (a&c)	
Sub.	BDI	HS	BDI	HS	BDI	HS	BDI	HS	BDI	HS	BDI	HS
1	24	15	27	15	+3	0	24	15	-3	0	0	0
2	18	11	16	12	-2	+1	15	10	-1	-2	-3	-1
3	30	13	35	13	+5	0	23	9	-12	-4	-7	-4
4	10	0	4	0	-6	0	4	0	0	0	-6	0
5	23	12	19	8	-4	-4	12	8	-7	0	-11	-4
6	33	16	12	10	-21	-6	6	2	-6	-8	-27	-14
7	31	12	33	13	+2	+1	35	11	+2	-2	+4	-1
8	13	3	15	13	+2	+10	20	5	+5	-8	+7	+2
9	22	7	13	9	-9	+2	16	9	+3	0	-6	+2
10	31	14	26	12	-5	-2	30	14	+4	+2	-1	0
11	10	1	11	0	+1	-1	0	0	-11	-1	-10	-1
12	22	10	20	8	-2	-2	12	3	-8	-5	-10	-7
13	12	0	3	0	-9	0	0	0	-3	0	-12	0
14	23	13	14	11	-9	-2	3	7	-11	-4	-20	-6
15	26	3	21	3	-5	0	23	3	+2	0	-3	0
16	15	10	10	0	-5	-10	5	4	-5	+4	-10	-6
17	32	0	21	10	-11	+10	19	3	-2	-7	-13	+3
18	12	0	16	1	+4	+1	13	0	-3	-1	+1	0
19	21	15	18	13	-3	-2	9	7	-9	-6	-12	-8
20	19	1	20	3	+1	+2	10	4	-10	+1	-9	+3
21	12	0	13	3	+1	+3	3	3	-7	0	-6	+3
22	10	0	9	0	-1	0	8	0	-1	0	-2	0
23	18	11	15	14	-3	+3	18	16	+3	+2	0	+1
24	23	11	17	8	-6	-3	11	7	-6	-1	-12	-4
25	24	15	17	12	-7	-3	15	9	-2	-3	-9	-6
M=	20.56	7.72	17.00		-3.56		13.36	5.96	-1.72		-7.08	
				7.64		-0.08				-3.52		-1.92

Notes-

Levels of Depression:
0-9: no depression
10-15: mild depression
16-19: mild-moderate depression
20-29: moderate to severe depression
30+: severe depression

The following prediction statements reflected the purpose of the study.

Prediction Statements

1. Comedy tapes will decrease the levels of depression in the members of the Aggressive-Humor Group.
2. Comedy tapes will decrease the levels of hopelessness in the members of the Aggressive-Humor Group.
3. Comedy tapes will decrease the levels of depression in the members of the Non-Aggressive Humor Group.
4. Comedy tapes wil decrease the levels of hopelessness in the members of the Non-Aggressive Humor Group.

Prediction statements 1,2,3, and 4 were supported by the data. A MANOVA was used initially to test for significance between the Aggressive-Humor (A-H) Group and the Non-Aggressive Humor (N-A H) Group on all BDI and HS test results.

The MANOVA (Table 5) shows that the two groups did not differ significantly from each other on any combination of the dependent variables (BDI 1,2, and 3 or HS 1,2, and 3) nor were significantly different concerning the subjects' responses to the comedy tapes. In this study, the .05 level was used for accepting or rejecting prediction statements.

Further analysis revealed significant changes in both groups across BDI1, 2, and 3 and for HS1, 2, and 3 testing. Table 6 displays the ANOVA for BDI1,2, and 3 and Table 7 for HS1, 2, and 3.

Table 5

Multivariate Analysis of Variance

Effect...Time

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. F*
Pillais	.45032	9.21647	4.00	45.00	.000
Hotellings	.81924	9.21647	4.00	45.00	.000
Wilks	.54968	9.21647	4.00	45.00	.000
Roys	.45032				

p<.05

Table 6
Analysis of Variance of
Within-Subject Effect
for BDI by Test and Groups
by Tests

Source of Variation	SS	DF	MS	F	Sig. of F
Within Cells	2761.60	96	28.77		
Tests	1212.37	2	606.19	21.07	.000*
Group/Tests	3.36	2	1.68	.06	.943**

*Significant
** not significant
p,.05

Table 7
Analysis of Variance of
Within-Subject Effect for
HS by Test and Groups by
Tests

Source of Variation	SS	DF	MS	F	Sig. of F
Within Cells	796.80	96	8.30		
Tests	86.52	2	43.26	5.21	.007*
Group/Tests	20.01	2	10.01	1.21	.304**

* Significant
** not significant
p,.05

T-tests for dependent (paired) samples were used to test the difference between the means of the two groups. The first t-test paired BDI 1 and BDI 2 and revealed a t-value of 3.23 with a 2-tail (non-directional) probability of .002. The next paired BDI 1 and BDI 3- the t-value was 5.96 and 2-tail probability .000. The last pair(BDI 2 and and BDI 3 showed a t-value of 3.85 and 2-tail probability .000. For the Hopelessness Scale measures, the first test paired HS 1 and HS 2- the t-value was 1.41 and 2-tail probability .165. HS 1 and HS 3 were paired and a t-value of 2.84 and a 2-tail probability of .006 was seen. The last paired sample, HS 2 and HS 3, had a t-value of 2.37 and a 2-tail probability of .022. Based on the values of t obtained, the means of the groups significantly differed from each other. Tables 8 and 9 are a compilation of the t-tests for BDI and HS measures, respectively.

Table 8

Paired Samples of t-Tests of BDI1,BDI2, and BDI3 of Tested Population

BDI1 and BDI2

Variable	# Cases	Mean	SD	SE
BDI1	50	20.5200	7.560	1.069
BDI2	50	16.8400	8.069	1.141

Mean Diff.	SD	SE	Corr.	2-Tail	t	DF	2-tail
3.6800	8.049	1.138	.471	.001	3.23	49	.002

BDI1 and BDI3

BDI1	50	20.5200	7.560	1.069			
BDI3	50	13.5600	8.795	1.244			
6.9600	8.258	1.168	.499	.000	5.96	49	.000

BDI2 and BDI3

BDI2	50	16.8400	8.069	1.141			
BDI3	50	13.5600	8.795	1.244			
3.2800	6.024	.852	.748	.000	3.85	49	.000

Note-

$p<.05$

Table 9

Paired Samples of t-Tests of HS1, HS2, and HS3 of Tested Population

HS1 and HS2

Variable	# Cases	Mean	SD	SE
HS1	50	7.4000	6.074	.859
HS2	50	6.5000	5.335	.754

Mean Diff.	SD	SE	Corr.	2-Tail	t	DF	2-Tail
.9000	4.519	.639	.693	.000	1.41	49	.165

HS1 and HS3

HS1	50	7.4000	6.074	.859			
HS3	50	5.5400	5.048	.714			
1.8600	4.625	.654	.668	.000	2.84	49	.006

HS2 and HS3

HS2	50	6.5000	5.335	.754			
HS3	50	5.5400	5.048	.714			
.9600	2.864	.405	.849	.000	2.37	49	.022

Note-
p<.05

Table 10 is a comparison between the Aggressive-Humor (A-H) group and the Non-Aggressive (N-A H) group in subjects' responses to the comedy tapes; also shown for each subject is the order in which the comedy tapes were viewed. The mean number of laughs recorded for each set of comedians in each group are equal.

Multiple correlations were generated to display relationships between the independent variable of humor and the dependent variable measures. Table 11 is the matrix between the laughter recorded for each comedian and baseline BDI and HS results for the tested population. Positive correlations are seen for both the Murphy and Pryor tapes and HS1: Murphy, .4631, p= .020; Pryor, .5319, p= .006. Negative correlations are noted for the Cosby tape with both the BDI1 (-.6195, p= .001) and HS1 (-.4907, p= .013). There was also a negative correlation between the Goldberg tape and BDI1, -.5766, p= .003.

Table 12 reveals a significant correlation between HS1 (baseline) and the total laughs recorded in the A-H Group (.5099, p= .009).

Serial correlations between the laughs recorded by comedian and the change in HS results are shown in Table 13. The total change in HS results (HS1-HS3) for the subjects who saw the Pryor tape was significant (.5049, p= .010). The correlations between BDI and HS results for both groups are

shown in Table 14. A correlation matrix for BDI3/ HS3 results with the total laughs recorded in each group is revealed in Table 15. Significant negative correlations in the N-A H Group for both BDI3 and HS3 are seen.

Table 10
Comparison of Humor Responses

Subject	Aggressive-Humor # Laughs M / P	* Order of Tape View.	Non-Aggressive Humor # Laughs C / G	* Order of Tape View.
1	272 250	3/4	0 11	1/2
2	125 70	3/4	67 35	1/2
3	118 32	4/3	0 0	1/2
4	161 182	4/3	360 230	1/2
5	345 350	3/4	8 75	2/1
6	215 298	3/4	47 44	1/2
7	75 96	3/4	12 2	1/2
8	98 158	3/4	175 80	1/2
9	148 143	3/4	47 8	1/2
10	95 52	3/4	2 4	1/2
11	25 35	3/4	47 55	1/2
12	130 110	3/4	64 43	2/1
13	84 115	3/4	160 135	1/2
14	142 144	3/4	33 180	1/2
15	218 225	3/4	30 9	2/1
16	64 35	3/4	130 163	1/2
17	43 70	3/4	29 7	1/2
18	125 153	3/4	280 350	1/2
19	14 14	4/3	27 2	2/1
20	79 89	3/4	9 27	2/1
21	11 21	4/3	39 70	1/2
22	49 58	3/4	62 84	1/2
23	60 58	4/3	83 37	1/2
24	80 49	4/3	48 45	2/1
25	89 63	3/4	35 42	1/2
Mean # Laughs:	115 115		68 68	

Notes
M=Murphy tape; P=Pryor tape; C=Cosby tape;G= Goldberg tape
* Order of Tape Viewing
1/2= Cosby/Goldberg
2/1= Goldberg/Cosby
3/4= Murphy/Pryor
4/3= Pryor/Murphy

Table 11

Correlation Matrix of Laughter Recorded for Each Comedian and Beck Depression Inventory and Hopelessness Scale Results of Tested Population

Correlations:	LM	LP	LC	LG	BDI1	HS1
LM	1.0000	.9179	.	.	.2406	.4631
	(0)	(25)	(0)	(0)	(25)	(25)
	p= .	p=.000	p= .	p= .	p=.247	p=.020
LP	.9179	1.0000	.	.	.2002	.5319
	(25)	(0)	(0)	(0)	(25)	(25)
	p=.000	p= .	p= .	p= .	p=.337	p=.006
LC	.	.	1.0000	.8126	-.6195	-.4907
	(0)	(0)	(0)	(25)	(25)	(25)
	p= .	p= .	p= .	p=.000	p=.001	p=.013
LG	.	.	.8126	1.0000	-.5766	-.3904
	(0)	(0)	(25)	(0)	(25)	(25)
	p= .	p= .	p=.000	p= .	p=.003	p=.054

Notes-

"." is printed if a coefficient can not be computed
LM= laughs recorded in response to Murphy tape
LP= laughs recorded in response to Pryor tape
LC= laughs recorded in response to Cosby tape
LG= laughs recorded in response to Goldberg tape
BDI1= baseline Beck Depression Inventory
HS1= baseline Hopelessness Scale
p<.05 level, 2-tailed significance

Table 12

Correlation Matrix for Measures of Serial BDI Results and Total Laughs Recorded in the Aggressive Humor (A-H) Group With Laughs for each Comedian

Correlations:	LM	LP	LC	LG	BDI1	HS1
TLA	.9770	.9814	.	.	.2239	.5099
	(25)	(25)	(0)	(0)	(25)	(25)
	p=.000	p=.000	p=.	p=.	p=.282	p=.009
DEP1	.1061	.1831	-.0264	-.0473	.4669	.1809
	(25)	(25)	(25)	(25)	(50)	(50)
	p=.614	p=.381	p=.900	p=.822	p=.001	p=.209
DEP2	.1355	.1803	-.2647	.0568	-.0969	.0409
	(25)	(25)	(25)	(25)	(50)	(50)
	p=.518	p=.389	p=.201	p=.788	p=.503	p=.788
DEPT	.2157	.3325	-.2070	.0033	.3844	.2062
	(25)	(25)	(25)	(25)	(50)	(50)
	p=.300	p=.104	p=.321	p=.987	p=.006	p=.151

Notes-

TLA= total laughs recorded in A-H Group
DEP1= BDI1-BDI2
DEP2=BDI2-BDI3
DEPT=BDI1-BDI3
BDI1=baseline Beck Depression Inventory
HS1=baseline Hopelessness Scale
"." is printed if a coefficient can not be computed
p<.05 level,2-tailed significance

Table 13

Correlation Matrix of HS Results for Tested Population With the Total Number of Laughs Recorded for Each Comedian

Correlations:	LM	LP	LC	LG	BDI1	HS1
HOPE1	.3417	.4954	-.0973	.1405	.0726	.5257
	(25)	(25)	(25)	(25)	(50)	(50)
	p=.095	p=.012	p=.644	p=.503	p=.616	p=.000
HOPE2	-.0554	.0614	-.0783	-.1706	.2083	.1136
	(25)	(25)	(25)	(25)	(50)	(50)
	p=.793	p=.770	p=.710	p=.415	p=.147	p=.432
HOPET	.3022	.5049	-.1511	.0095	.2000	.5839
	(25)	(25)	(25)	(25)	(50)	(50)
	p=.142	p=.010	p=.471	p=.964	p=.164	p=.000

Notes-

LM= laughs recorded Murphy tape
LP= laughs recorded Pryor tape
LC= laughs recorded Cosby tape
LG= laughs recorded Goldberg
HOPE1= HS1-HS2
HOPE2= HS2-HS3
HOPET= HS1-HS3
"." is printed if a coefficient can not be computed
p<.05 level, 2-tailed significance

Table 14

Correlation Matrix of HS Results and BDI Results for Tested Population

Correlations:	DEP2	DEPT
HOPE1	.2492 (50) p=.081	.3526 (50) p=.012
HOPE2	.1675 (50) p=.245	.1794 (50) p=.213
HOPET	.3472 (50) p=.013	.4556 (50) p=.001

Notes-
HOPE1=HS1-HS2
HOPE2=HS2-HS3
HOPET=HS1-HS3
DEP2= BDI2-BDI3
DEPT= BDI1-BDI3
p<.05 level, 2-tailed significance

Table 15

Correlation Matrix of BDI3 and HS3 Test Results with Total Laughs Recorded for Tested Population

Correlations:	TLNA	TLA
BDI3	-.4227	-.0985
	(25)	(25)
	p=.035	p=.639
HS3	-.5177	.1980
	(25)	(25)
	p=.008	p=.343

Note-

p<.05 level, 2-tailed significance
TLNA= total laughs recorded in N-A H Group
TLA= total laughs recorded in A-H Group

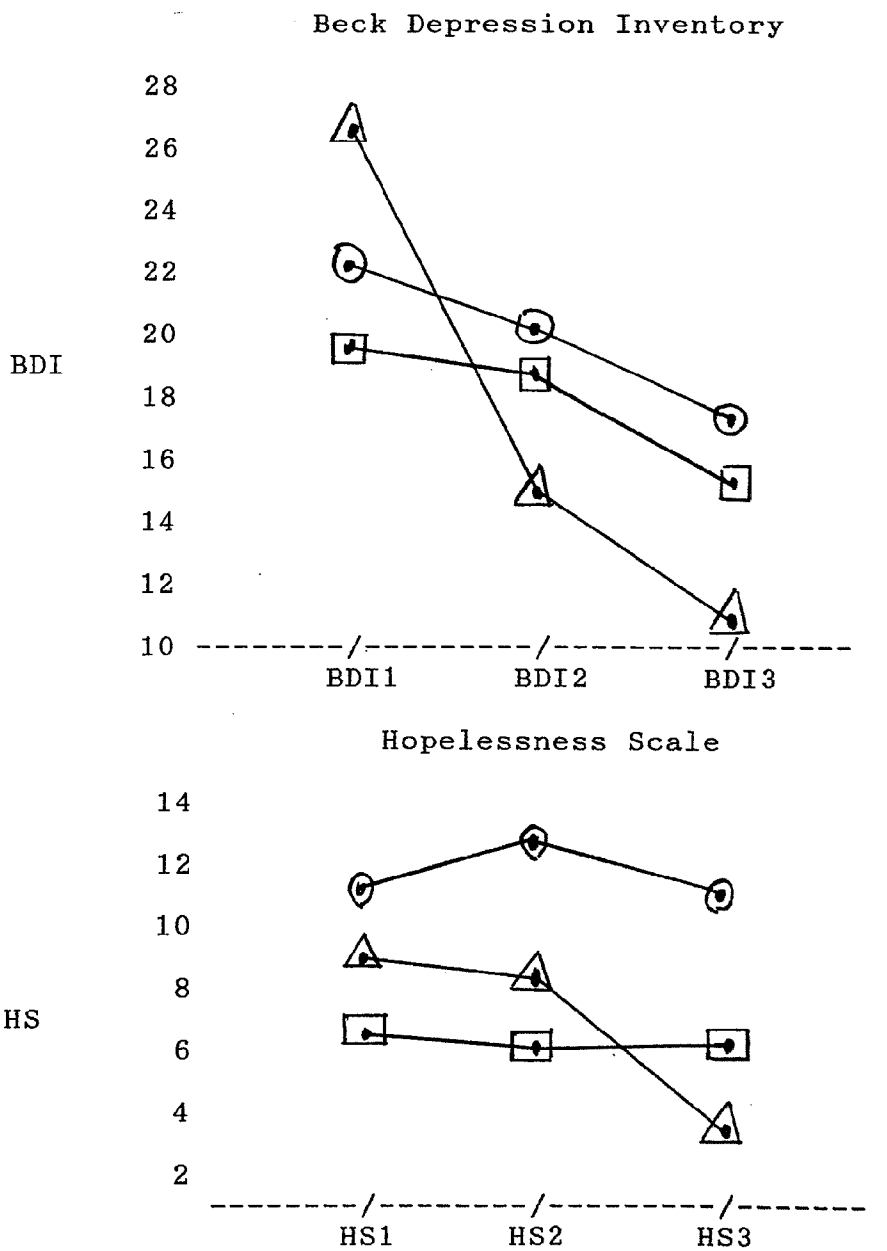
Means of BDI and HS results and marital status for the tested population are plotted in Table 16. Means of the single subjects for the BDI1, BDI2, and BDI3 measures are 19.447, 16.842, and 13.632, respectively. The results of the same measures for the married subjects are 26.400, 14.400, and 10.200; for the divorced/separated subjects, 22.143, 18.571, and 15.571.

Means of the single subjects for the HS1-HS3 measures are 6.579, 5.632, and 5.053, respectively. The results of the same measures for the married subjects are 8.600, 6.200, and 3.200; for the divorced/separated subjects, 11.000, 11.429, and 9.857. As to marital status, depression levels for the married subjects in both groups decrease more than for the single or divorced/separated subjects.

Table 17 displays the same for race. Means of BDI1, BDI2, and BDI3 for the black subjects are 18.429, 15.536, and 13.214, respectively; for the caucasian subjects, the means are 23.182, 18.500, and 14.000. On the HS tests, the means for the black subjects are 5.250, 4.536, and 4.321, respectively; for the caucasian subjects, 10.136, 9.000, and 7.091. With regard to race, the depression and hopelessness of the black subjects appeared to maintain over the course of the study, as compared to the caucasian subjects.

Table 16

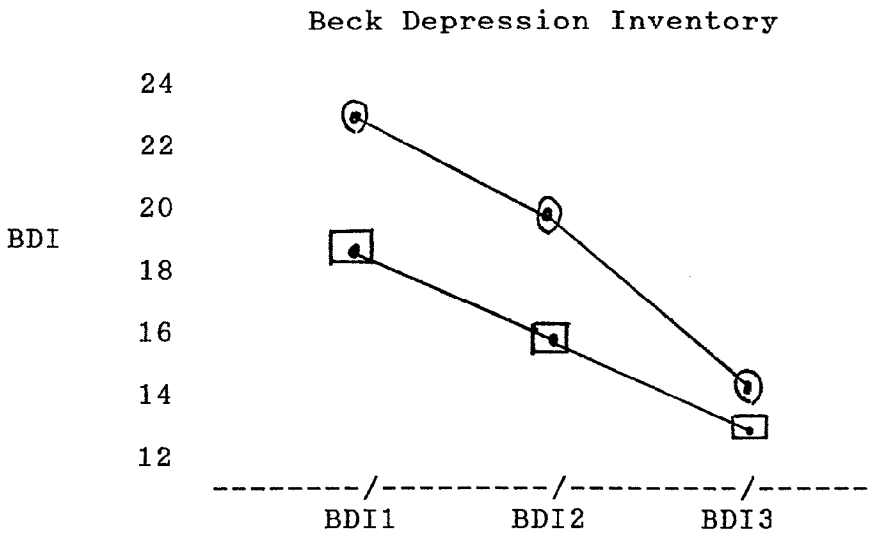
Plot Diagrams of Beck Depression Inventory and Hopelessness Scale Means and Marital Status of Tested Population

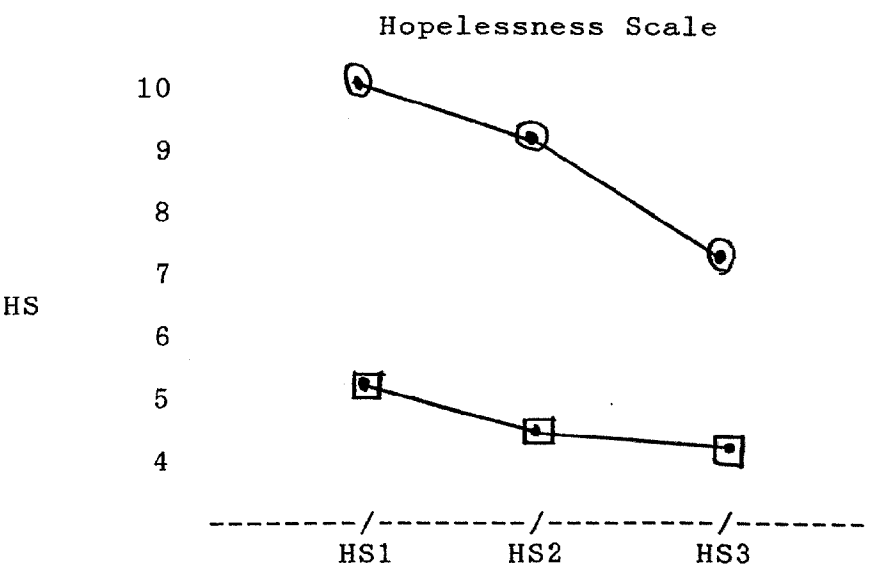


Notes-	N
= single-	38
= married-	5
= Div./Sep-	7

Table 17

Plot Diagram of Beck Depression Inventory and Hopelessness Scale Means and Race of the Tested Population





Notes-

	N
▣ = Black	28
◉ = Caucasian	22

Table 18 shows the Between-Subjects and Within-Subjects ANOVA's of Marital Status on the HS and BDI test results. The Between-Subjects effect of Marital Status/ HS results is significant at the .05 level with an F of .045; with the BDI, there is a Within-Subject effect of Marital Status shown by a significant F of .032.

Table 19 is an ANOVA showing a significant Between-Subjects effect of Race on HS testing. With $p<.05$, the F is .003.

Table 18

ANOVA
Between-Subjects Effects of
Marital Status on HS Test
Results

Source of Variation	SS	DF	MS	F	Sig. F
Within Cells	3185.60	47	67.78		
Constant	4119.89	1	4119.89	60.78	.000
MSTAT	448.51	2	224.25	3.31	.045

p<.05

ANOVA
Within-Subjects Effects of
Marital Status on BDI
Test Results

Source of Variation	SS	DF	MS	F	Sig. F
Within Cells	2474.04	94	26.32		
Tests	1134.07	2	567.03	21.54	.000
MSTAT by tests	290.92	4	72.73	2.76	.032

p<.05

Table 19

ANOVA
Between-Subjects Effects of
Race on HS Test Results

Source of Variation	SS	DF	MS	F	Sig. F
Within Cells	3030.85	48	63.14		
Constant	6680.99	1	6680.99	105.81	.000
Race	603.26	1	603.26	9.55	.003

p<.05

Table 20 is An example of a completed Laughter Chart including the narrative comments of a subject who viewed the Cosby tape.

The Eysenck Personality Inventory (EPI) was completed by all subjects. The results, shown in Tables 21 and 22, indicate that a majority of the personality profiles were of the neurotic-extraversion type (28 out of 50 or 56%). This profile is in accordance with studies' showing that prisoners locate in the neurotic-extraversion quadrant.

The results of this exploratory study were presented in this chapter. Quantitative findings as well as qualitative dependent and independent variable outcomes were shown. The prediction statements were supported by the data. The implications of these results will be discussed in Chapter 5.

Table 20

Laughter Chart

Subject ID#	Comedy Film	No. Times Laughed	Humor Response Rating*
93088	Cosby	1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 11	Good +

Narrative/Comments (include what you thought of tape, e.g., funny or not funny and why, could relate to it or not and why, etc.):

It was funny. Because its not often that the body parts are made fun of. I guess I could relate to it if I were fat or wore glasses. But, I don't.

* Humor Response Rating:
Poor Humor Response- 0-5 laughs per film
Fair Humor Response- 5-10 laughs per film
Good Humor Response- 10-15 laughs per film

Table 21

EPI Results of Tested Population

	A-H Group				N-A H Group			
Subject #	E	N	L	Interp.	E	N	L	Interp.
1	11	14	4 Q	N-I	9	17	2	N-I
2	16	10	1	N-E	15	11	3	N-E
3	18	12	0	N-E	13	14	2	N-E
4	17	3	3	S-E	13	14	1	N-E
5	9	17	4 Q	N-I	15	17	1	N-E
6	15	20	0	N-E	13	20	0	N-E
7	17	18	2	N-E	15	19	0	N-E
8	21	14	3	N-E	14	9	5 Q	E
9	14	3	1	S-E	19	7	1	N-E
10	13	18	2	N-E	18	17	0	N-E
11	15	12	4 Q	N-E	14	13	2	N-E
12	6	22	2	N-I	17	22	2	N-E
13	14	18	1	N-E	9	4	4 Q	S-I
14	12	8	4 Q	S-E	11	17	2	N-I
15	13	11	3	N-E	17	9	2	S-E
16	15	10	3	N-E	13	13	3	N-E
17	9	12	2	N-I	17	14	3	N-E
18	16	16	2	N-E	10	7	2	S-I
19	15	18	1	N-E	10	9	6 Q	S-I
20	14	12	1	N-E	13	14	3	N-E
21	16	9	4 Q	S-E	10	8	3	S-I
22	5	18	4 Q	N-I	10	3	2	S-I
23	13	16	1	N-E	8	20	1	N-I
24	20	16	3	N-E	11	18	1	N-I
25	16	17	1	N-E	7	17	1	N-I
Totals:	16/25 (64%)			N-E	12/25 (48%)			N-E
	5/25 (20%)			N-I	5/25 (20%)			N-I
	4/25 (16%)			S-E	1/25 (4%)			E
					5/25 (20%)			S-I
					1/25 (4%)			S-E

Notes:

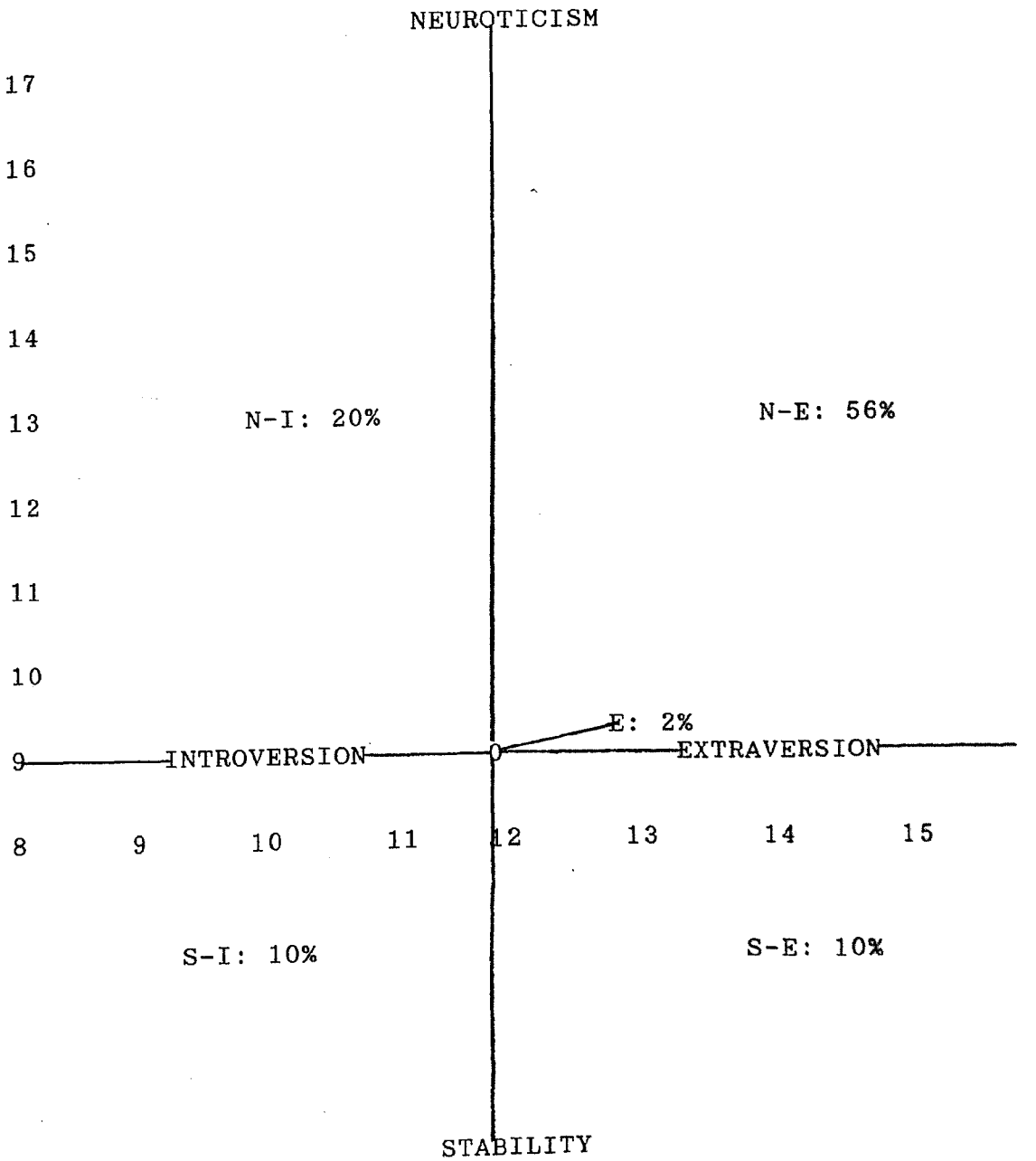
N= Neuroticism; S= Stability; E= Extraversion; I= Introversion

Result Categories- E= Extraversion scale; N= Neuroticism scale; L= Lie scale

Q= faking good; result questionable.

Table 22

Graphic Presentation of Tested Population on Dimensions of Extraversion-Introversion and Neuroticism-Stability



CHAPTER V

DISCUSSION, LIMITATIONS, and RECOMMENDATIONS

The purpose of this study was to explore the effects of humor on the severity of depression and hopelessness in a population of incarcerated males. The independent variable was humor in the form of video-tapes of stand-up comedy performances; the dependent variables were the levels of depression and hopelessness. Broadly, its content focused upon humor, the general mood state of depression and the feeling of hopelessness. Central to this exploration was the domain in which it took place- the often overlooked correctional system. This final chapter will provide a discussion of the findings, some of its limitations, recommendations for future studies, and a summary.

Discussion

The prediction statements were supported by the data, i.e., the levels of depression and hopelessness in both groups were decreased over the course of the study. The changes, as measured by serial testings of the Beck Depression Inventory and Hopelessness Scale, were statistically significant at $p<.05$.

From the Idiographic Profile information, both the A-H and N-A H Groups appeared to be homogeneous in many

respects. Notwithstanding, the groups differed in some important areas. Regarding the number of laughs recorded, the subjects in the A-H Group laughed on the average almost twice of that recorded for the N-A H Group. In one respect it can be argued that the type of humor presented by Murphy and Pryor is less "mental" and allows for accelerated responses, i.e., the cognitive component is diminished and therefore reactions to it are more spontaneous.

The subjects in the A-H Group maintained a higher level of laughter over the course of the study despite an almost equivalent level of baseline depression compared to the N-A H Group. Perhaps the Murphy and Pryor tapes held a higher degree of relatedness or association for this group's members. In their presentations, Murphy and Pryor are very "street" and make many references to drug use and the correctional system. The members' comments on the Laughter Charts support this reasoning.

Another factor pertaining to the content of the Murphy and Pryor tapes concerned the direction involved and may have prompted a relatively excessive and more sustained degree of laughter by the subjects in the A-H Group. These tapes incorporated frequent views of the audience responding to the comedians. The Cosby and Goldberg routines did not reveal this technique being

used as frequently. This difference in production structure may have given the A-H Group subjects an added stimulus.

There were no significant differences relative to the comedian or set of comedians this population viewed, i.e., the mean change in levels of depression or hopelessness did not appear to be effected by one tape more than another. Although depression and hopelessness in the total population was decreased significantly, the stimulus (humor) was not "style-related."

It was noted that the subjects seemed to enjoy the tapes presented, not only based on the laughs recorded but also on the moods observed during the viewings. There were two marked exceptions to this: one subject in the N-A H Group did not laugh at all in response to either of the tapes viewed; another subject in this group did not laugh while viewing the Cosby tape. The EPI for these two subjects revealed that the first subject was a neurotic-extravert type; in the second case, a neurotic-introverted.

In the first case, the personality profile appears to add little understanding as to why there was no laughter. The subject's narrative comments ("The comedy was good, and the humor was good, it is I have so much on my mind I just can't get into it:Sorry.")

though, might.

In addition, the baseline depression level for this subject was 30 (severe depression); apparently, the humor did not affect his degree of depression. For the second subject, the personality profile that was generated may help to explain his lack of laughter.

Evidence upported significant interactions between both marital status and race and levels of depression and hopelessness. Analyses of variance were employed to test the significance of the variances of the repeated-measures results (serial BDI and HS) within and between the two groups. With these repeated-measures, subject differences became a source of variance. Two were significant: marital status and race.

Correlational analyses revealed that the baseline levels of hopelessness of the subjects in the A-H Group were significantly related to the laughter recorded, i.e., although feeling hopeless, they laughed. The reverse was seen with the N-A H Group: the baseline levels of depression and hopelessness were negatively or inversely correlated with the viewing of the Cosby tape, i.e., the more depressed and hopelessness these subjects were, the less they laughed. Regarding the response to the Goldberg tape, only the depression levels were significantly negatively correlated.

The findings in this exploratory research supported all of the prediction statements formulated, indicating statistically significant decreases in depression and hopelessness levels of both groups.

Some Limitations of the Study

The limitations of this study manifest in the threats to its validity. These confounding factors need to be considered in terms of effecting the dependent variables.

History may have been a threat to the study's validity, given the environment in which it took place. The inmates are housed in sections which accommodate anywhere from 30 to 50 people. Ninety percent of their activities occur in these sections; they are active, noisy and provide a small community for socialization. Any interactions by the subjects could have affected their responses to the tapes as well as to the measures of depression and/or hopelessness during the course of the study. To minimize history as a factor, the "every other" day schedule of viewing and testing was maintained.

Maturation may have been a threat in several ways. As mentioned earlier, certainly each subject did not see the tape at the same time of the day. In fact, depending on what was occurring at the center, some subjects saw the tape in the evening (after the first

viewing, e.g., two mornings previously). This may have affected their energy and interest at the respective times. Features of the correctional system may have had influence on the moods of the subjects. Those having bails that were relatively low or with a high probability of being paid, or for those nearing the end of their incarceration or close to trial date, may have been disposed to "facilitated" laughter and changes in depression and hopelessness.

Although a pre-test was not used per say, baseline measures of depression and hopelessness were. This plus serial administrations of the BDI and HS may have confounded the results. Most of this testing threat is felt to be balanced by the proven validity of serial BDI and HS testings.

Although the study's short duration was, on one level, appropriate for a detention correctional setting, the time span is considered a relative weakness.

Construct validity was fairly well-maintained. The use of serially BDI and HS testings assisted with this, as well as the utilization of more than one dependent variable. The validity of the BDI and HS is well-known and clearly measure the intended variables. More than one variant of the independent variable was measured as the subjects were given the opportunity to make written

comments after viewing the tapes. The comments were congruent with the number of laughs recorded, in most cases.

Generalizations from the research are limited for two reasons. Random selection was not used in this study. Any subject who qualified based on the established guidelines was included. A sample was not selected from a larger qualifying population. In addition, random placement was not utilized. Residents were placed in one of two designated groups, using an every-other placement method. Although these limitations exist, they do not detract from the findings in the study.

Recommendations

The results of this research have implications in both theory and practice. Conceptually, the study adds knowledge about humor and its uses, specifically its effects on depression and hopelessness. Initially, the point was made that a void exists in research on humor in the form of comedy tapes. This extends to studies done in the correctional setting. The present research interfaced these variables in this over-looked and un-researched sub-population.

Considering humor as a cognitive process, the study augmented the views and findings of Beck and his inclusion of cognitions in depression. The effects of the comedy tapes, in decreasing levels of depression and

hopelessness, changed pre-experimental negative feelings of the subjects as evidenced by their narrative comments. The episodic (short-term) decreases in depression and hopelessness imply the influence of modifications in perspective and cognitions. Reference is made here to Needles and Abramson (1990) and their model of hopelessness depression which highlights positive events. Alloy, Clements, and Kolder's (1985) suggested therapeutic intervention of "changing points in the chain for decreasing vulnerability to hopelessness depression" now might include the use of humor. Hollon and Garber (1980) propose lessening the stressfulness of events to prevent hopelessness depression. The use of comedy tapes appeared to decrease the stress and tension felt by the subjects, again as noted by their narrative comments.

Ziv (1984) spoke of five functions of humor. All five, in one form or degree, pertain to the population tested: the need for effective coping mechanism, the expression of aggressive needs, dealing with sexuality, dealing with anxiety, and a means of escaping reality. Interestingly, these functions formed a great deal of the content of the comedy tapes.

The subjects in the study had relatively high baseline levels of depression and hopelessness. Gill's reflections on what she calls "disability humor" related to

the content of the tapes where Murphy and Pryor used sarcasm and directness and Cosby and Goldberg self-effacement and insight. It can be presumed that within this population a fair degree of anger, fear, and stress existed. The tape contents, particularly in the Murphy and Pryor routines, contained expressions of anger against people and institutions. The connotation is that the subject matter reduced fear and stress, and mollified the anger; associatedly, levels of depression and hopelessness were reduced.

Martin and Lefcourt's investigation of stress and depression reduction with the use of humor was mirrored along these lines. Although the current research was short-term, it supported Nussbaum and Michaux's work on humor and the severity of depression, to see if humor itself had an effect.

The study's short duration was appropriate for a detention center as most residents are housed for a month or so. Theoretically, it fosters the notion that humor has application in this often neglected and un-researched sub-population. Although the study broadly cut across and into the "chartered" waters of humor, depression, and hopelessness, the investigation is unusual in that these variables were studied interactively. further, there is no evidence in the literature that they have been studied

and applied in a corrections setting.

The research contributes to an understanding of an activity that not only provided a respite in an otherwise "dark" environment for the resident but which had a significant effect on individual depression and hopelessness. The interaction of variables in this research have important implications clinically as well as from economic and legal perspectives. Although simple in design with its repeated-measures format, the results give correctional health care providers an awareness that humor has application for their clients.

One implication is that mental health personnel now have a proven individual or group modality that can improve the resident's mental health. The activity therapist or social worker can incorporate the viewing of comedy tapes into the resident's schedule of activities and can assume that there will be no deleterious effects. As an option, this is important for two reasons: the resident has an appropriate activity; and, it can be used to develop socialization skills (if the viewings are conducted in a group format). the lack of activities and inattention to the broadening of skills are two of the areas with which critics of corrections find fault when standards are reviewed.

Psychiatric care providers can apply the results of

the present research in its current form or in modification either in a detention setting or in a prison environment. Mental health providers are perpetually seeking evaluative and treatment approaches that are valid, reliable, and today computer-friendly. As shown in the current research, humor is easily measurable as to response and effect. The instruments utilized here are comprehensive yet uncomplicated. The Beck Depression Inventory and Hopelessness Scale give personnel tools with which to measure depression and hop[elessness and combat the most commonly felt emotion among residents, that of depression. By extension therapeutically, feelings of hopelessness can be countered.

The Idiographic Profile developed for this research rendered useful information with which to compare subjects and groups on demographic, legal, psychiatric, family, social, and abbreviated medical levels. The form has quantitative as well as qualitative functions and roles. It is computer-friendly in that answers are convertible to computer data-retrieval systems.

The inclusion of the Eysenck Personality Inventory in the basic assessment package was beneficial, even though the population placed in the expected social-neurotic quadrant. this instrument served as an "outrigger" for those subjects appearing as outliers in humor

response, by offering plausible explanations for minimal or absent laughter. In view of the threats to its validity, modifications in methodology for future studies are suggested; yet, the changes need not be on a wholesale basis.

The validity of the results would have been enhanced had the subjects been housed in smaller sections or preferably cells where they were isolated from each other. Studies in a prison environment could easily have this advantage. As their accessability to one another is diminished, the threat of setting and treatment interaction would like-wise decrease.

Although significance was shown in certain key areas of the study, an expanded number of subjects would give added power. This could readily be accomplished in a prison setting. Not only could the present research be replicated with an enlarged pool of subjects, broader-scoped studies could be enacted without wide changes or great difficulty. Examples encompass comparisons between viewing responses of individuals in a group arrangement; another one would be cross-correlational research with written and visual forms. These examples would provide salient information regarding the effects of groups on the responses to humor, inasmuch as many activities in correctional settings are in group format; also, the use

of a variety of humor would aid in the scope of findings as well as in its utilization.

Depression and hopelessness are not indigenous to inmates in a correctional setting. The implications of the present study are thought to be meaningful to correction officials as well as to mental health-care providers. With increasing crime and by necessity added pressure on facilities to house an ever-growing number of offenders, internal changes need to be studied, evaluated, and implemented. A possible efficacious approach may have been revealed in the form of humor. In addition to having experimental significance, it influenced involved feelings such as depression and hopelessness.

DISSERTATION SUMMARY

A review of literature was initiated to ascertain whether previous efforts had incorporated the variables of humor, depression and hopelessness interactively; and, specifically, in a corrections setting. It was found that a variety of research on depression and aspects of hopelessness had been done but primarily in separate designs. Additionally, the review disclosed that investigations on humor have occupied an expanded portion of sociological/ psychological considerations, especially in recent years. considerations, especially in recent years. Research in corrections was shown to be lacking, as further evidence of the neglect in this sub-population. With this void, the present study was undertaken.

The psychological and emotional features of the humor response were the foundation from which the prediction statements evolved. Previous research on humor, in measuring its effects, have used several styles, e.g., written and visual in the forms of jokes and cartoons, and verbal with audio-casettes. The present study included visual as well as verbal components in the structure of stand-up comedy routines of four well-known comedians.

The population consisted of 50 incarcerated males at a medium-sized suburban detention center in Maryland. The detention center is at the minimum to medium security level

which houses approximately 540 residents; its racial mix is usually 50% caucasian and 50% black.

Notices were posted in the fourth floor housing sections to solicit interest in the research. The instruments and forms included the Consent Form, Idiographic Profile (IP), Beck Depression Inventory (BDI), Hopelessness Scale (HS), and Eysenck Personality Inventory (EPI). A general orientation to the study as well as time to complete forms was provided for all of the residents who signed up; the orientation was held in a classroom. In order to qualify, the resident had to attain at least a ten (10) on the BDI and minimally, a one (1) on the HS. In addition, the qualifying criteria on the IP included: no recent history of psychiatric in-patient admissions or out-patient therapy or counseling; no current treatment with psychotropic medication; no history of depression, schizophrenia, or bipolar disorder; no recent history of being abused; no history of drug or alcohol use/abuse (unless the last ingestion was at least two weeks prior); no recent head injury.

As the residents met the criteria, they were placed in one of two groups- the Aggressive Humor (A-H) or Non-Aggressive Humor (N-A H) Group. Each subject in the A-H Group saw two comedy tapes, one by Richard Pryor and one by Eddie Murphy; each subject in the N-A H Group also

saw two comedy tapes, one by Bill Cosby and one by Whoopi Goldberg. Each viewing ran sixty minutes except for the Goldberg tape which had a total running time of fifty-one minutes.

During the course of the study, certan subjects were lost due to bail and court releases, expiration of sentences, or re-assignments to other correctional facilities. As a result, other subjects had to be tested for qualification. Having done this, all fifty subjects saw their respective tapes and were serially tested for depression and hopelessness. Following each viewing, the subjects were given a BDI and HS to complete in order to measure any progressive differences in the levels of depression and hopelessness. For each subject, the study took five days to complete from the time he viewed the first tape. Folders with collected data were maintained on each subject during the course of the study as well as a audio-record of each session. In addition, a Laughter Chart was used to manually record the number of laughs for each session. Each subject was given the opportunity to make comments regarding the funniness and relatedness of the tapes.

Correlational matrices, multiple analysis of variance, analysis of variance, and t-tests were the statistical methods employed.

Major findings included: all prediction statements

appeared to have been supported by the data; the use of comedy tapes appeared to have significantly decreased the levels of depression and hopelessness in a population of incarcerated males ($p<.05$); no evidence was found to use aggressive more than non-aggressive humor; and, evidence was found that marital status and race significantly interacted with levels of depression and hopelessness.

Appendix A

CONSENT FORM

Identification of Project	PROJECT TITLE The Effects of Humor on Depression and Hopelessness of Incarcerated Males
Statement of Age of Subject	I state that I am over 16 years of age and wish to participate in a research conducted by Stan Silverman at the Graduate School, University of Maryland, College Park, Dept. of Human Development.
Purpose	The purpose of the research is to measure the effects of humor on depression and hopelessness.
Procedures	The procedures involve five sessions, 1 day apart, during which I will be asked to complete an idiographic and personality profile, and depression and hopelessness measures; additionally there will be comedy tapes to view.
Confidentiality	All information collected in the study is confidential, and my name will not be identified at any time. Information will be maintained under lock and key to which only the investigator will have access.
Risks	I understand that there are no risks to my participation in this study.
Benefits: Freedom to Withdraw and ask Questions	I understand that the experiment is not designed to help me personally, but to learn more about the effects of humor on depression and hopelessness. I understand that I am free to ask questions or to withdraw from participation at any time without penalty. I understand that, legally there will be no benefit from participating or penalty from withdrawing as a participant.
Name,Address and Phone Number of Faculty Advisor	Dr. John Eliot, Professor, Department of Human Development, University of Maryland, College Park, Maryland 20742; Phone:(301) 405-2801.

_____ _____

Signature of Subject Date

Appendix B

Idiographic Profile

Baltimore County Detention Center No.- _ _ _ _ _ _ _ _ _

Race- Black=0
Caucasian=1
Other=2

Age at last birthday (in years)- _ _

Educational level- Grade school=1
grade= _ _
College= 2
years= _ _

Reading level (if known) in years- _ _

Employment during one month prior to incarceration-
yes= 1
no= 2

Legal:

Date of Incarceration- _ _/_ _/_ _

Current charge(s)-
Misdemeanor= 0
Felony= 1
Both= 2
Court Date(s)- _ _/_ _/_ _; _ _/_ _/_ _
If sentenced, number of days to release-
_ _
Number of Prior Arrest(s)- _ _
Charge(s)- ; ;
Number of Prior Convictions- _ _
Number of Prior Incarcerations- _ _

Psychiatric:

Previous In-Patient Admissions- No= 0
Yes= 1
If yes, number- _ _
Date(s)- Month- _ _
Year- _ _
Diagnosis (es): ;
: ;
Unknown= 2

Previous Out-Patient Therapy/Counseling- No =0
Yes= 1
Approximate No. of Sessions- _ _
Month- _ _
Year- _ _

Previous Treatment with Psychotropic Medication-
No= 0
Yes= 1
If yes and if known, what is it-
(are they)

History of- Depression= 1
Schizophrenia= 2
Bipolar Disorder= 3
None of above= 4

Family:

Marital Status-
Single= 0
Married= 1
Separated or Divorced= 2

Living Situation-
Homeless= 0
Live alone in residence= 1
Live with friend(s)= 2
Live with family= 3
Problem(s) with family- No=0
Yes= 1

Children- No= 0
Yes= 1
If yes, number- _ _

History of being abused-
No= 0
Yes= 1
If yes- Physical= 2
Sexual= 3
Both= 4

Number of visits received in past two weeks- _ _

Social:

History of Drug use/abuse-
No= 0
Yes= 1
If yes, approximate date of last ingestion: Month- _ _
Year- _ _

History of alcohol use/abuse-
No= 0
Yes= 1
If yes, approximate date of last ingestion: Month- _ _
Year- _ _

Medical:

No known medical condition= 0

Seizures= 1

Head Injury= 2

Appendix C
E P I

	Yes	No
1. Do you often long for excitement?		
2. Do you often need understanding friends to cheer you up?		
3. Are you usually carefree?		
4. Do you find it very hard to take no for an answer?		
5. Do you stop and think things over before doing anything?		
6. If you say you will do something do you always keep your promise, no matter how inconvenient it might be to do so?		
7. Does your mood often go up and down?		
8. Do you generally do and say things quickly without stopping to think?		
9. Do you ever feel "just miserable" for no good reason?		
10. Would you do almost anything for a dare?		
11. Do you sudenly feel shy when you want to talk to an attractive stranger?		
12. Once in a while do you lose your temper and get angry?		
13. Do you often do things on the spur of the moment?		
14. Do you often worry about things you should not have done or said?		
15. Generally do you prefer reading to meeting people?		
16. Are your feelings rather easily hurt?		
17. Do you like going out a lot?		
18. Do you occasionally have thoughts and ideas that you would not like other people to		

	Yes	No
know about?		
19. Are you sometimes bubbling over with energy and sometimes very sluggish?		
20. Do you prefer to have few but special friends?		
21. Do you daydream a lot?		
22. When people shout at you, do you shout back?		
23. Are you often troubled about feelings of guilt?		
24. Are all your habits good and deliberate ones?		
25. Can you usually let yourself go and enjoy yourself a lot at a gay party?		
26. Would you call yourself tense or "highly-strung"?		
27. Do other people think of you as being very lively?		
28. After you have done something important, do you often come away feeling you could done better?		
29. Are you mostly quiet when you are with other people?		
30. Do you sometimes gossip?		
31. Do ideas run through your head so that you cannot sleep?		
32. If there is something you want to know about, would you rather look it up in a book than talk to someone about it?		
33. Do you get palpitations or thumping in your heart?		
34. Do you like the kind of work that you need to pay close attention to?		

	Yes	No
35 Do you get attacks of shaking or trembling?		
36. Would you always declare everything at the customs, even if you knew that you could never be found out?		
37. Do you hate being with a crowd who play jokes on one another?		
38. Are you an irritable person?		
39. Do you like doing things in which you have to act quickly?		
40. Do you worry about awful things that might happen?		
41. Are you slow and unhurried in the way you move?		
42. Have you ever been late for an appointment or work?		
43. Do you have many nightmares?		
44. Do you like talking to people so much that you would never miss a chance of talking to stranger?		
45. Are you troubled by aches and pains?		
46. Would you be very unhappy if you could not see lots of people most of the time?		
47. Would you call yourself a nervous person?		
48. Of all the people you know are there some whom you definitely do not like?		
49. Would you say you were fairly self-confident?		
50. Are you easily hurt when people find fault with you or your work?		
51. Do you find it hard to really enjoy yourself at a lively party?		

	Yes	No
52. Are you troubled with feelings of inferiority?		
53. Can you easily get some life into a rather dull party?		
54. Do you sometimes talk about things you know nothing about?		
55. Do you worry about your health?		
56. Do you like playing pranks on others?		
57. Do you suffer from sleeplessness?		

Appendix D
Beck Depression Inventory

ID #_ _ _ _ _ _ _ _ _ BDI #-
Date-_ _/_ _/_ _

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling during the past few days and circle the number beside the statement you picked. If more than one answer applies to how you have been feeling, circle the highest number.

1. 0 I do not feel sad.
   1 I feel sad.
   2 I am sad all the time and I can't snap out of it.
   3 I am so sad or unhappy that I can't stand it.

2. 0 I am not particularly discouraged about the future.
   1 I feel discouraged about the future.
   2 I feel I have nothing to look forward to.
   3 I feel that the future is hopeless.

3. 0 I do not feel like a failure.
   1 I feel that I failed more than the average person.
   2 As I look back on my life, all I can see is a lot of failures.
   3 I feel I am a complete failure as a person.

4. 0 I get as much satisfaction out of things as I used to.
   1 I don't enjoy things the way I used to.
   2 I don't get real satisfaction out of anything anymore.
   3 I am dissatisfied or bored with everything.

5. 0 I don't feel particular guilty.
   1 I feel guilty a good part of the time.
   2 I feel quite guilty most of the time.
   3 I feel guilty all of the time.

6. 0 I don't feel I am being punished.
   1 I feel I may be punished.
   2 I expect to be punished.
   3 I feel I am being punished.

7. 0 I don't feel disappointed in myself.
   1 I am disappointed in myself.
   2 I am disgusted with myself.
   3 I hate myself.

8. 0 I don't feel I am worse than anybody else.
   1 I am critical of myself for my weaknesses or mistakes.
   2 I blame myself all the time for my faults.
   3 I blame myself for everything bad that happens.

9. 0 I don't have any thoughts of killing myself.
   1 I have thoughts of killing myself, but I would not carry them out.
   2 I would like to kill myself.
   3 I would kill myself if I had the chance.

10. 0 I don't cry anymore than usual.
    1 I cry more now than I used to.
    2 I cry all the time now.
    3 I used to be able to cry, but now I can't cry even though I want to.

11. 0 I am no more irritated now than I ever am.
    1 I get annoyed or irritated more easily than I used to.
    2 I feel irritated all the time now.
    3 I don't get irritated at all by the things that used to irritate me.

12. 0 I have not lost interest in other people.
    1 I am less interested in other people than I used to be.
    2 I have lost most of my interest in other people.
    3 I have lost all of my interest in other people.

13. 0 I make decisions about as well as I ever could.
    1 I put off making decisions more than I used to.
    2 I have greater difficulty in making decisions than before.
    3 I can't make decisions at all anymore.

14. 0 I don't feel I look any worse than I used to.
    1 I am worried that I am looking old or unattractive.
    2 I feel that there are permanent changes in my appearance that make me look unattractive.
    3 I believe that I look ugly.

15. 0 I can work about as well as before.
    1 It takes an extra effort to get started at doing something.
    2 I have to push myself very hard to do anything.
    3 I can't do any work at all.

16. 0 I can sleep as well as usual.
    1 I don't sleep as well as I used to.
    2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
    3 I wake up several hours earlier than I used to and cannot get back to sleep.

17. 0 I don't get more tired than usual.
    1 I get tired more easily than I used to.
    2 I get tired from doing almost anything.
    3 I am too tired to do anything.

18. 0 My appetite is no worse than usual.
    1 My appetite is not as good as it used to be.
    2 My appetite is much worse now.
    3 I have no appetite at all anymore.

19. 0 I haven't lost much weight, if any lately.
    1 I have lost more than 5 pounds.
    2 I have lost more than 10 pounds.
    3 I have lost more than 15 pounds.

20. 0 I am no more worried about my health than usual.
    1 I am worried about physical problems such as aches and pains, or upset stomach, or constipation.
    2 I am very worried about physical problems and it's hard to think of much else.
    3 I am so worried about my physical problems, that I cannot think about anything else.

21. 0 I have not noticed any recent change in my interest in sex.
    1 I am less interested in sex than I used to be.
    2 I am much less interested in sex now.
    3 I have lost interest in sex completely.

Appendix E
Hopelessness Scale

ID # _ _ _ _ _ _ _ _ _ HS #-
Date-_ _/_ _/_ _

Please place a T for true or an F for false in the right margin of each statement as it applies to you.

1. I look forward to the future with hope and enthusiasm
2. I might as well give up because I can't make things better for myself
3. When things are going badly, I am helped by knowing they can't stay that way forever
4. I can't imagine what my life would be like in 10 years
5. I have enough time to accomplish the things I most want to do
6. In the future, I expect to succeed in what concerns me most
7. My future seems dark to me
8. I expect to get more of the good things in life than the average person
9. I just don't get the breaks, and there's no reason to believe I will in the future
10 My past experiences have prepared me well for my future
11 All I can see ahead of me is unpleasantness rather than pleasantness
12 I don't expect to get what I really want
13 When I look ahead to the future, I expect I will be happier than I am now
14 Things just won't work out the way I want them to
15 I have great faith in the future

16 I never get what I want so it's foolish to want anything

17 It is very unlikely that I will get any real satisfaction in the future

18 The future seems vague and uncertain to me

19 I can look forward to more good times than bad times

20 There's no use in really trying to get something I want because I probably won't get it

Appendix F

Laughter Chart

Subject ID#	Comedy Film	No. Times Laughed	Humor Response Rating*

Narrative/Comments (include what you thought of tape, e.g., funny or not funny and why, could relate to it or not and why, etc.):

* Humor Response Rating:
  Poor Humor Response- 0-5 laughs per film
  Fair Humor Response- 5-10 laughs per film
  Good Humor Response- 10-15 laughs per film

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