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FAKEABILITY OF THE UNIVERSITY OF RHODE ISLAND CHANGE ASSESSMENT WITH A SUBSTANCE ABUSE POPULATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
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*****

The Ohio State University
1996

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ABSTRACT

The Stages of Change Model developed by Prochaska, Norcross and DiClemente provides a promising approach to enhancing the effectiveness of a wide range of interventions for helping individuals with problems. The University of Rhode Island Change Assessment (URICA) has been used to explore and describe groups of individuals, in a stage of change context, with a wide range of problem behaviors. Although the URICA has repeatedly been found to have sound psychometric properties, no evaluation of the effect of intentional faking response bias on the URICA has been reported to date.

It was the purpose of this study to measure the effect of intentional faking on URICA test scores in a population of individuals seeking chemical dependency treatment. The major research questions were; 1) To what extent are subjects able to fake on each of the URICA subscales? 2) What is the profile or template of the typical fake response? and 3) What are the implications of faking on the URICA for research and application of the Stages of Change Model in the field of chemical dependency treatment?

One hundred fifty (n=150) subjects were randomly assigned to one of three conditions. Subjects were instructed to either fake bad, fake good, or respond honestly, depending on the group to which they were assigned. The study found that type of
instruction had a significant effect on all of the subscale scores when the three groups were compared. Individuals in the fake bad condition were able to manipulate scores on each of the four subscales in the predicted direction. No significant differences were found between the fake good and control group scores. Recommendations are made for further research and the use of caution when administering the URICA to populations where malingering may be a problem.
Dedicated to my mother Myrtle Ann Brigham with gratitude for many lessons in the virtues of love, dedication and perseverance.
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CHAPTER 1

INTRODUCTION

It is estimated that twenty three million individuals in the United States abuse alcohol and illicit drugs. Approximately eight hundred thousand people participate in substance abuse treatment annually. As can be seen, only a relatively small portion of those experiencing substance abuse problems enter treatment. Most treatment programs are designed for individuals who have experienced considerable problems related to their substance abuse and success in these programs is largely dependent on the individuals willingness to make significant changes in their life. Substance abusers who are not ready to take action are generally considered not ready for treatment. In these cases highly confrontational intervention techniques or coercion may be used to pressure the substance abuser into becoming ready to take action. For the relatively small percentage of substance abusers who do actually enter programs, treatment is effective for only a limited portion. Treatment effectiveness outcome literature reports a wide range of findings. The more optimistic of these studies report up to sixty-six percent abstinence rates at six
months following a short term patient treatment (Wallace, et al. 1988), while the other end of the range reports as low as three percent (Peele, 1990). Regardless of which end of the range is accepted as being reflective of expected recovery rates, three percent or sixty-six percent, the fact remains that the vast majority of substance abusers never enter treatment and for those who do a large portion do not achieve outcome goals, as defined by these researchers, following treatment.

The Stages of Change Model developed by James Prochaska, University of Rhode Island, and Carlo DiClemente, University of Houston, has been used to explore how people change in relation to problems. This focus on the process of change provides potential for predicting outcomes and for improving the effectiveness of intervention efforts. The Stages of Change Model grew out of the work of Prochaska in developing the Transtheoretical Model. In this stage model individuals are considered to move through stages which are invariant levels of change that are represented in both a period of time and a set of tasks which must be completed to change a problem behavior.

The Stages of Change Model has been used to describe the process of change in a number of settings where individuals are dealing with problems, i.e. general outpatient psychotherapy, dietary fat reduction with cardiac patients, smoking cessation programs, and alcoholism treatment. An important implication of this approach to problems is its
potential to improve treatment outcomes by matching or tailoring interventions to individuals based on their current stage in the change process. In one smoking cessation study, a brief intervention designed to move individuals just one stage of change in thirty days, resulted in a doubling of the chances subjects would make a significant attempt at abstinence in the next six months.

The Stages of Change Model can potentially make important contributions to the substance abuse treatment field in two areas. First, it can contribute by providing a broader conceptual frame work of change stimulating the development of treatment interventions aimed at a wider range of the substance abuse popualtion, including individuals not yet ready to take action. Second, it can contribute by providing dynamic variables for matching interventions with patients that have been demonstrated to improve outcomes in related fields.

**Statement of the Problem**

It was the purpose of this study to measure the effect of intentional faking on URICA test scores in a population of subjects seeking admission to adult inpatient and day-treatment chemical dependency programs. The study sought to answer the following questions.

1. To what extent are subjects in a substance abuse setting able to fake on each of the subscales of the URICA including the following?
   a. Precontemplation
2. Is there a typical fake good and fake bad URICA profile or template?

3. What are the implications of faking on the URICA for research and application of the Sages of Change Model in the field of substance abuse and chemical dependency treatment?

The specific hypothesis tested in this study were:

I. Mean scores on each of the URICA subscales will differ between groups of subjects instructed to a) fake good, b) fake bad and c) respond honestly.

1. Under fake bad instructions the mean scores are:
   a) lower on the Contemplation subscale than mean scores on that subscale under both the fake good and honest conditions.
   b) lower on the Action subscale than mean scores on that subscale under both the fake good and honest conditions.
   c) lower on the Maintenance subscale than mean scores on that subscale under both the fake good and honest conditions.
   d) higher on the Precontemplation subscale than mean scores on that subscale under both the fake good and honest conditions.

2. Under fake good instructions the mean scores are:
a) higher on the Contemplation subscale than mean scores under both the fake bad and honest conditions.

b) higher on the Action subscale than mean scores for that scale under both the fake bad and honest conditions.

c) higher on the Maintenance subscales than mean scores for that scale under both the fake bad and honest conditions.

d) lower on the Precontemplation subscale than mean scores for that subscale under both the fake bad and honest conditions.

II. Profile patterns are different between groups of subjects instructed to a) fake bad and b) fake good.

1. The typical fake bad profile has:
   a) the lowest mean scores on the Contemplation, Action and Maintenance subscales, and
   b) the highest mean score on the Precontemplation subscale.

2. The typical fake good profile has:
   a) the highest mean scores on Contemplation, Action and Maintenance subscales, and
   b) the lowest mean score on the Precontemplation subscale.

III. In the honest condition mean scores on each of the subscales will be less extreme than mean scores under either of the faking conditions.
1. When compared to mean scores under the fake good condition, the mean scores in the honest condition are:
   a) lower on the Contemplation subscale,
   b) lower on the Action subscale,
   c) lower on the Maintenance subscale, and
   d) higher on the Precontemplation subscale.

2. When compared to the mean scores under the fake bad condition, the mean scores in the honest condition are:
   a) higher on the Contemplation subscale,
   b) higher on the Action subscale,
   c) higher on the Maintenance subscale, and
   d) lower on the Precontemplation subscale.

Rationale

The current study was conducted with a substance abuse adult population seeking intensive intervention services. Substance abuse and addiction have a tremendously negative impact on individuals, families, and society as a whole. The 1993 National Household Survey on Drug Abuse indicated that of those surveyed 5.6 percent had used illicit drugs in the past year, 11.8 percent had used them in the past year, and 37.2 percent had used them in their life time (SAMHSA, 1995). Analysis of demographic trends have
resulted in estimates of 1,807,288 alcohol abusers or alcoholics in the United States in 1995 (Williams, 1987). The annual economic cost of substance abuse in 1990 was estimated at $66.9 billion for drug abuse and $98.6 billion for alcohol abuse. These cost estimates include treatment for alcohol and drug abuse, losses in productivity caused by premature death, and inability to perform usual activities, crime, destruction of property and other related costs (Rice, 1990).

Much attention has been given to the area of substance abuse treatment outcomes. Even the more optimistic of these studies report that many people who enter chemical dependency treatment programs do not benefit from treatment or continue to have problems following treatment. Success rates based on abstinence reports following inpatient alcoholism treatment range from three to sixty six percent (Peele, 1990; Wallace, et al., 1988). Regardless of which end of the range is accepted as being reflective of expected recovery rates, there remains a large portion of chemically dependent individuals who are not achieving success following treatment.

An important problem in follow-up and prediction of success rate studies is that the majority of these studies consider relatively static variables like drug of choice, drug use history, age, gender, and other demographic characteristics. For the most part, these types of variables are not under the control of chemical dependency clinicians and, therefore, even if these variables do result in solid predictions of treatment outcomes and abstinence rates, they contribute little to increasing the effectiveness of treatment efforts (Marlatt, 1988; DiClemente, Carbonari & Velasques, 1992). The combination of poor
treatment success rates and the absence of meaningful characteristics for predicting
treatment success results in a need to develop variables related to treatment success that
can be used in a practical sense to improve treatment effectiveness. The current study
evaluated an instrument being used in a number of settings to explore the application of
Stages of Change variables with the substance abuse population.

The Stages of Change Model has been used to study and improve the change
process in a number of areas where people are dealing with problems, including general
mental health outpatient counseling, smoking cessation, dietary fat reduction, and
alcoholism. Stage of change has been successfully used in smoking cessation research to
predict outcomes, to increase treatment utilization, to broaden the continuum of services
to more accurately reflect the populations in need of services, and to improve effectiveness
of interventions through stage and treatment matching.

Measurement is a critical issue in the application of the Stages of Change
approach. Appropriate matching of interventions with stage is dependent on accurately
identifying a subject's current stage of change. One method for assessing stage of change
is a self-report questionnaire entitled the University of Rhode Island Change Assessment
(URICA). This instrument was developed with a general psychotherapy outpatient
population using a rational design. It contains no validity scales or measures of test-taking
attitude.

The current study examined the threat of intentional faking to the URICA findings
when administered to a substance abuse population. While the literature suggests that
substance abuse self-report information tends to be generally reliable, there are a number of factors that can affect accurate reporting. These include the sensitivity of the information requested, the specificity of the validation criteria, the personal characteristics of the respondent such as sober versus intoxicated or length of recovery, and the demand characteristics of the situation such as intake interview versus research evaluation. Self-report data with a substance abuse population are inherently neither valid nor invalid, rather, validity varies according to methodological sophistication of the data gatherer and personal characteristics of the respondent (Babor, Brown and Del Boca, 1990).

Self-report questionnaires are subject to many forms of response bias such as social desirability, faking good, acquiescence or yea-saying, nay saying, extremity response set, mid-point response set and faking bad (Wrightman, 1977). These many forms of response bias can threaten the validity of questionnaire scores if the bias is not measured or controlled. Rational scales, such as the URICA, due to their high face validity are particularly vulnerable to dissimulation or intentional faking. Although a number of studies have documented the URICA's strong psychometric properties (McConnaughy, DiClemente, Prochaska, & Velicer, 1983; McConnaughy, DiClemente, Prochaska & Velicer, 1989; DiClemente & Hughes, 1990) and a good deal of normative information is being developed (Prochaska & DiClemente, 1992), no previous studies have evaluated its fakeability.

The issue of intentional faking becomes particularly important when dealing with a population, such as a substance abuse population, where many individuals are coerced into
programs. When coerced into treatment or assessment situations, these individuals may be
motivated to misrepresent themselves as either worse off or more ill than they actually are,
to avoid consequences such as legal action or the opposite, more well off than they
actually are, to avoid recommendations for more restrictive levels of care. The knowledge
that an instrument is fakeable is not sufficient in itself. As Kostick comments, in reference
to his work with the Perception and Preference Inventory (PAPI), what may be perceived
as the negative by one individual may be perceived as the positive by another (Kostick,
1977). Furnham and Craig note two major reasons for conducting a faking study, the first
is to establish the profile of a "faker," and the second is to establish which traits are most
susceptible to faking and in which direction (Furnham & Craig, 1987).

The URICA is currently being used to collect data on large numbers of inpatient
substance abuse treatment subjects and it has already been used to describe subjects
seeking outpatient alcoholism treatment. When used as an assessment instrument it has
the potential to be used to describe substance abuse populations for the purpose of
developing stage of change specific intervention programming and for the purpose of
allocation of resources to individuals. The current study evaluated the potential effects of
intentional faking on data collected using the URICA.

Definition of Terms

The following are offered as definitions of relevant terms used throughout the
study.
**Substance Abuse:** Substance abuse refers to repeated excessive, high risk or harmful use of mind altering drugs which cause a marked mood-swing. The following drug classes are included, central nervous system (CNS) depressants, CNS stimulants, opiate narcotics, and hallucinogens. Neither tobacco nor nicotine use is included in this term.

**Chemical Dependency:** Chemical dependency refers to addiction to a substance in one of the drug classes listed under substance abuse. Addiction is characterized by a persistent pattern of harmful use of drugs which results in inability to function adequately in a major life area such as career/school, family, social, legal, or financial. Dependency usually includes physiological markers such as high tolerance to the effects of a drug, increased tolerances to the effects of a drug, withdrawal symptoms in the absence of the drug, or organic damage. These physiological markers are more prevalent with some drugs such as alcohol and are not considered significant with other drugs such as marijuana. Neither tobacco nor nicotine addiction is included in this term.

**Chemical Dependency and Substance Abuse Treatment:** Chemical dependency and substance abuse treatment refer to a wide range of theoretical orientations which result in program strategies and techniques for treating addiction and abuse. For the purpose of this study the term is used to describe any program specifically intended to treat chemical dependency or substance abuse.
Faking/Dissimulation: Faking and dissimulation refer to situations when the individual is intentionally giving false responses to create a specific impression, i.e., that he or she is ill, or is a good candidate for a job. (Furnham, 1986).

Intervention: Intervention refers to the specific and intentional actions taken to interrupt a person’s substance abuse or dependency and to assist an individual in achieving a higher level of functioning.

Precontemplation Stage: The Precontemplation stage of change is characterized by a lack of awareness of the problem. People in this stage do not believe that they have a problem. They are unaware or under-aware of the problem.

Contemplation Stage: The Contemplation Stage is characterized by awareness of the problem and a lack of commitment to change.

Preparation Stage: The Preparation Stage is characterized by a serious intention to change. Individuals in this stage plan to change within the next month and have usually made a serious but unsuccessful attempt at change within the last year. They may be currently making minor changes, for example cutting down on the number of cigarettes smoked in a day, or putting off until later in the day their first cigarette.

Action Stage: This stage of change is characterized by active efforts by the individual to change their behavior and/or their environment.

Maintenance Stage: The Maintenance Stage involves the activities and processes necessary to successfully maintain established change and avoid relapse or return to a
problem behavior. When behavioral changes have been established and continued for six months through the Action Stage, the individual then enters the Maintenance Stage.

Response Bias: Response bias refers to a whole range of responses to interviews, surveys, or questionnaires which bias the response from the correct, honest, and accurate response.

Social Desirability: Social desirability refers to the tendency on behalf of the subject to deny socially undesirable traits, to claim socially desirable ones, and the tendency to say things which place the speaker in a favorable light.

Limitations of the Study

The limitations of this study are identified in four areas, the questions posed in the Problem Statement, the instrument used for data collection, the sample selected, and the design of the study. First, the study was limited to evaluating intentional faking on the URICA and does not evaluate the possible effects of other types of response bias on the questionnaire. Second, the study is limited to the URICA and cannot be generalized to any other instrument including other instruments that are used to measure the Stages of Change. Third, the study was conducted with a lower socioeconomic group of adults seeking intensive chemical dependency treatment services. Faking research in general has been found to produce similar results when conducted with a number of different populations. The results specific to fakability are generalizable to other populations. However, the current study is limited to a lower socioeconomic group of adults seeking
intensive chemical dependency treatment services, and only tentative conclusions can be made about other populations such as different socioeconomic groups, adolescents, or individuals dealing with problems other than chemical dependency, with regard to how these individuals view normality and abnormality in the stage of change context.

Lastly, the subjects in this study were instructed to intentionally fake responses. This type of faking instruction has been used repeatedly to produce robust results on the fakeability of questionnaires. This type of procedure does not evaluate the actual types of responses that may be produced by a more sophisticated or subtle approach to faking such as may occur in settings were individuals are attempting to avoid detection of faking. This method evaluates the fakeability of the URICA, it does not establish if faking actually occurs in other settings.

Organization of the Remainder of the Study

This chapter presented the statement of the problem, rationale for the study, definition of terms and limitations of the study. Chapter Two includes a review of the relevant literature. Chapter Three describes the procedures used in conducting the study and Chapter Four presents the findings. Chapter Five provides a summary, conclusions, and recommendations for further study.
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CHAPTER 2

REVIEW OF LITERATURE

This chapter reviews the literature concerning intentional faking response bias on the URICA. The review of literature covers three areas. First, the literature on the Stages of Change Model is reviewed. The research and literature on change specifically for populations with addictive problems is emphasized. Second, the literature on the measurement of the Stages of Change is reviewed. Third, the body of research and literature in the area of fakeability on assessment tools is presented. The issue of fakeability is central to the current study, specifically the potential for faking on instruments similar to the URICA.

**Stages of Change Model**

The Stages of Change Model literature can be presented in three areas: the Transtheoretical Model, the processes of change, and the stages of change.
The Transtheoretical Model is an atheoretical system for the integration of diverse theories and techniques of psychotherapy. It integrates elements of a number of approaches to psychotherapy and behavioral change into a schema for the treatment of problem behaviors. The model incorporates elements of psychoanalytic, Adlerian, Existential, Person-Centered, Gestalt, Interpersonal, emotional flooding, behavioral, and cognitive approaches to change. The elements drawn from these theoretical orientations are organized along two dimensions. The first is referred to as the processes of change and the second as the stages of change (Prochaska & Norcross, 1994).

The processes of change are described as covert and overt activities that individuals use to change affect, thinking, behavior, or relationships related to problems or patterns of living. The processes were originally described in a comparative analysis of systems of psychotherapy (Prochaska, 1979). They were later modified as a result of empirical research on how people change addictive behaviors (DiClemente & Prochaska, 1982; Prochaska & DiClemente, 1983). There are ten processes of change which have received the most empirical support, these include (a) consciousness raising, (b) catharsis/dramatic relief, (c) self-reevaluation, (d) environmental reevaluation, (e) self-liberation, (f) social liberation, (g) counterconditioning, (h) stimulus control, (i) contingency management and (j) helping relationships (Prochaska & Norcross, 1994).

The most effective use of the processes of change involves coordinating their application at the right time within the context of an individual's progression of change. The stages of change are the second dimension of the Transtheoretical approach and were empirically derived (Prochaska & Norcross, 1994). The stages of change are
conceptualized as invariant levels of change that are represented in a period of time and a set of tasks which must be completed to change a problem behavior. The five stages of change are currently labeled (a) Precontemplation, (b) Contemplation, (c) Preparation, (d) Action, and (e) Maintenance.

The Precontemplation stage is characterized by a lack of awareness of the problem. People in this stage do not believe that they have a problem; they are unaware or under-aware of the problem. Other people in their lives, such as spouses, children, parents, siblings, friends, employers, courts, or others, may be able to see the problem, but the individual in the precontemplation stage does not. If a person in this stage of change does enter a treatment intervention, it usually is in response to pressure or coercion by others, such as their family, employer or the criminal justice system. They frequently resent being forced to focus on or change a behavior that they do not recognize as a problem. Precontemplators may remain in this stage indefinitely. There may be no active process of change in this stage.

The Contemplation Stage is characterized by awareness of the problem and a lack of current commitment to change. Individuals at this stage might report that they know they have a problem, but they are just not ready to change. Often, there is intention to change within the next six months. These individuals are weighing the pros and cons of change. They tend to over value the problem behavior, such as focusing on the positive feelings of smoking, drinking, or eating. They may not be able to imagine themselves satisfied without the problem behavior. For example, a smoker cannot see him or herself content as a non-smoker. People in this stage tend to greatly overestimate the effort or
cost of changing, they may imagine it will take all of their time and energy to change; and that they will experience significant loss. People can remain in the contemplation stage for extended periods of time. Individuals in this stage may be deeply aware of the seriousness of their problem, but lack commitment to change.

The Preparation Stage is characterized by a serious intention to change. These individuals plan to change within the next month and have usually made a serious but unsuccessful attempt at change within the last year. They may be currently making minor changes, for example cutting down on the number of cigarettes smoked in a day, or putting off their first cigarette until later in the day. These individuals are aware of having a serious problem, they have commitment to change; however, they have not begun to take significant action.

The Action Stage of change is the most apparent. It is characterized by active efforts by the individual to change their behavior and/or their environment. Many people, including professionals, often equate change with action and, therefore, fail to recognize the prerequisite work involved in getting to this stage and the later efforts necessary to maintain change. At this stage, the problem behavior is being actively addressed. For example, an individual would actually be abstaining from smoking at this point.

In this stage individuals are changing lifestyles and environments and have considerable commitment to change. Because it is the most apparent stage of change, it is the most likely to receive external recognition. People in this stage are more likely to receive support and recognition from others for their change. Success in this stage of change is dependent upon a sustained level of energy and commitment. Following the
establishment of action, such as abstinence from smoking, this stage, it has been
determined, will continue for approximately six months.

When behavioral changes have been established and continued for six months
through the Action Stage, the individual then enters the Maintenance Stage. This stage
involves the activities and processes necessary to successfully maintain change and avoid
relapse. This is not a static stage, rather it involves continuing integration of changes into
lifestyle and attitudes. As a result, the individual’s self image may also continue to change.
If counseling services are sought there will usually be focus on issues of growth and
getting support to maintain change. Continued progress is made in developing a
repertoire of resources and skills that maintain change (Prochaska, DiClemente &

According to the authors, although the stages are considered to be invariant, the
majority of individuals move through them in a cyclical rather than a linear sequential
fashion. Addicted individuals often relapse, and, in this model, relapse is considered to be
more often the rule than the exception. In the cyclical model individuals make progress
through the stages, relapse, and then return to an earlier stage before progressing with
change. For example, an individual might enter the Action Stage and be abstinent from
smoking, then, after a period of time, relapse and begin smoking, although remaining
aware that their smoking is a problem. In this situation the person would have progressed
to the Action Stage and then “recycled” to the Contemplation Stage. Studies focused on
smoking cessation have demonstrated that most people make three or four attempts to
quit before having a significant period of abstinence (Schachter, 1982)
The ten processes of change function most effectively at specific points in the stages of change. In the precontemplation stage, the consciousness raising, dramatic relief and environmental evaluation processes are most likely to be active. In the contemplation stage, the same processes begun in the precontemplation stage continue and self reevaluation also becomes an active process. In the preparation stage, the earlier processes of consciousness raising and dramatic relief become less important and the self liberation process begins to be utilized. In the action stage of change, the processes focused on consciousness raising and catharsis become less helpful and processes for conditional stimuli, contingency control choosing, and therapeutic relationships become the most effective.

There is some support for the notion that continued use of the earlier processes of change, such as dramatic relief, may actually be counterproductive. In the maintenance stage, the latter processes, including social liberation, reinforcement management, stimulus control, counter conditioning, and helping relationships, continue to operate as the individual seeks to maintain and enhance established gains (Prochaska & Norcross, 1994).

Treatment matching and treatment approach modification are significant implications of this model (Prochaska & DiClemente, 1992). Treatment professionals frequently develop excellent action oriented programs (Prochaska, 1979). However, smoking research indicates the majority of addicted individuals are not in the action stage (Gottlieb et al., 1991). Research on smoking cessation has indicated that programs designed to move patients one stage level within a thirty day period double the chances that the individual will make a significant attempt to change within six months (Prochaska...
& DiClemente, 1992). Effective use of the Stages of Change Model for program development and treatment matching is dependent on accurately identifying individual’s stage of change.

**Measurement of The Stages of Change**

Two methods of evaluating stage of change dominate the research literature. The first is a criterion method which uses an algorithm to place an individual in one of the stages of change. The second method is a self-report questionnaire developed using a rational design entitled the University of Rhode Island Change Assessment (URICA).

Criterion measure of stage of change uses the responses to five questions to assign individuals to a stage of change according to an algorithm. The following questions are used in smoking cessation studies. Are you currently smoking? Are you seriously considering quitting within the next six months? Have you quit smoking for a period of at least twenty four hours in the past year? How long have you been off cigarettes? This measure is dependent on historical information which is somewhat static and does not provide any information about differences between individuals in a given stage (Prochaska & DiClemente, 1992).

The University of Rhode Island Change Assessment is a thirty-two item self-report questionnaire. Subjects respond to each item using a five-point Likert type scale in which one is equal to “Strong Agreement” and five is equal to “Strongly Disagree.” The questionnaire takes approximately ten minutes to complete.
The stages of change are operationalized through this instrument, which was produced by McConnaughy, DiClemente, Prochaska, and Velicer (1983). The items for the instrument were developed by using a rational design as described by Edwards (1970). Utilizing the five theoretical stages of change, 165 items were generated. Each item was intended to describe an activity or attitude related to a specific stage of change. The 165 items were reviewed by three judges who were graduate students in psychology and familiar with the stages of change. Only items that produced 100 percent agreement among all three judges were kept. Agreement meant each judge identified the item with only one stage and each judge identified the item with the same stage. The result produced 145 items which were then reduced to 125 items to have an equal number of items representing each stage, twenty-five representing each of the five stages.

The remaining 125 items were analyzed in three steps for the purpose of reducing the total number of items. At each step of analysis, three types of calculations were used. A principle components analysis was performed on the matrix of interitem correlations, both Varimax and Oblique rotations were performed. The correlations between each item and the total score for all items measuring that theoretical stage were obtained. The values of coefficient alpha for the items measuring each stage with and without a particular item included were evaluated.

The authors reported details for the final thirty-two items which represented four of the original five stages. The sample for this study consisted of 155 people presenting for psychotherapy at several community counseling centers. The subjects were consecutive admissions who were given the questionnaire at the first visit and asked to return it at a
future visit. No information is reported on the characteristics or the number of subjects who did not return the questionnaire. The Decisional Stage (now called the Preparation Stage) was dropped in the second stage of analysis, because most of its items were loading on other components in the principle components analysis, and, therefore, it was determined to not be measuring a distinct stage.

Details of the principal components analysis on the 32 X 32 matrix of interitem correlations were reported. Eight items loaded on each of four components with no items loading significantly on more than one component. Varimax rotated component patterns indicate factor loadings of .58 to .82 for component 1; .69 to .77 on component 2, .61 to .79 for component 3; and .54 to .74 for component 4. These four components account for fifty-eight percent of the variance.

Internal consistency reliability coefficients were evaluated for each of the eight item subscales. The Coefficient Alphas reported for each of the subscales were: Precontemplation, .88; Contemplation, .88; Action, .89; and Maintenance, .88. The unweighted sum of each of the eight items on each subscale was used to calculate the four scale scores for each subject. The means and standard deviation and correlations between the four scales were calculated. These scores were converted to standardized t scores with a mean of 50 and a standard deviation of 10.

A hierarchical cluster procedure was performed to determine if subjects could be classified into a small number of homogenous subgroups. A nine-cluster solution was
nterpreted which together accounted for 140 of the total 155 subjects. Each of these nine clusters was theoretically interpreted as a clinical change profile (McConnaughy, et al., 1983).

In 1989, a follow up evaluation of the URICA was conducted using a population presenting with serious psychiatric disturbances. In this study, 327 adult outpatients completed the questionnaire under conditions similar to the previous study. This study reports findings consistent with the original study. The authors reported Cronbach's coefficient alphas for the four scales: Precontemplation, .79; Contemplation, .84; Action, .84, and Maintenance, .82. Cluster analyses of the subjects scores resulted in an eight-cluster solution which was very similar to the nine-cluster solution reported in the earlier study (McConnaughy, et al., 1989).

In 1990, the URICA was evaluated with a sample of 224 adults entering outpatient alcoholism treatment. This study used similar methods of data collection and analysis as the two previous studies. Cronbach's Alpha was used for internal consistency and reported as Precontemplation, .69; Contemplation, .75; Action, .82; and Maintenance, .80. In the principle components analysis, the factor structure replicated the earlier studies, however, several items had weak and inconsistent loadings and therefore the weakest item in each scale was dropped for all subsequent data analysis. The cluster analysis of scale scores produced a five-cluster solution. The five clusters were very similar to five of the clusters reported in the earlier studies and the results were considered consistent with earlier findings (DiClemente & Hughes, 1990).
This instrument contains no validity scales or measures of test-taking attitudes.

The current study examined the threat of intentional faking to the URICA findings when administered to a substance abuse population.

Faking

The primary purpose of the current study was to evaluate the susceptibility of the URICA to a type of response bias best described as intentional faking. In the current section of the selected review of literature, faking is reviewed in its context as a type of response bias.

Delroy Paulhus (1991) defines response bias as “…a systematic tendency to respond to a range of questionnaire items on some bias other than the specific item content…” Adrian Furnham (1986) defines response bias as “a generic term for a whole range of responses to interviews, surveys or questionnaires which bias the response (from the correct, honest, accurate response).” The three most notable types of response bias are socially desirable responding (including intentionally or unintentionally presenting worse or better than you actually are); acquiescence or yea saying (and its opposite nea saying); and extremity response (the tendency to choose the extreme responses) (Furnham, 1986; Paulhus, 1991).

The current review focused exclusively on intentional faking which is included under the first type of response bias, socially desirable responding. Within the area of socially desirable responding, two dimensions of bias have been described. The first deals with self-deception and the second with other-deception. Paulhus (1984) provided
empirical support for a two factor distinction. The first factor was described as self-deceptive positivity, an honest but exaggerated positive presentation of personal characteristics. The second factor was described as impression management, a presentation of personal characteristics tailored to an audience.

The concept of positive self deception has been found to have a positive correlation with personality characteristics such as adjustment, optimism, self-esteem, and general compatibility (Paulhus, 1991). The latter factor, impression management, does not appear to be significantly related to these characteristics. Paulhus describes impression management primarily in terms of the tendency of individuals to intentionally give false responses to create the most positive social image. Furnham (1986) prefers the term faking or dissimulating, which is used to describe respondents deliberately giving false responses to create an impression that may be either negative or positive. For example, an individual may wish to appear mentally ill to avoid legal consequences or receive disability benefits; or on the other hand they may wish to appear better than they actually are to gain a desired job. Faking or dissimulating can be used to refer to any intentionally dishonest response. This broader notion of faking is more representative of the majority of faking research.

Response bias and dissimulating present a considerable threat to the validity of self-report questionnaires. In a review of literature in this area Nederhof (1985) found that response bias could account for anywhere from ten to seventy-five percent of the variance in self-report instruments. Furnham (1986) describes four primary approaches that test constructors and researchers have used to measure or control for faking bias.
The first is to incorporate a measure of lying or faking into the instrument, as in the Minnesota Multiphasic Personality Inventory (MMPI) Lie Scale. The second method is to evaluate the correlation between a subject's scores on a questionnaire and the same subject's scores on an additional instrument designed specifically to measure social desirability responding, such as the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). A third method is to perform an item-by-item analysis of the questionnaire (Edwards, 1970) to determine which items are sensitive to faking and in which direction. Finally, a popular method is to measure the fakeability of an instrument by instructing subjects to intentionally fake their response to present a particular impression.

A considerable number of studies have been completed using the latter method to evaluate a variety of instruments including: the MMPI (Cofer, Chance & Judson, 1949; Peterson, Clark & Bennet, 1989; Woychyshyn, McElheran & Romney, 1992), the MMPI-2 (Austin, 1992; Bagby & Rogers, 1994; Cassisi & Workman, 1992; Graham, Watts & Timbrook, 1991; Timbrook, Graham, Keiller & Watts, 1993), the Millon Clinical Multiaxial Inventory (MCMI) (McNeil & Meyer, 1990; Wierzbicki, 1993), the MCMI-II (Bagby, Gillis, Toner & Goldberg, 1991; Retzlaff, Sheehan & Fiel, 1991), the California Psychological Inventory (CPI) (Lanning, 1989), the Perception and Preference Inventory (PAPI) (Furnham & Craig, 1987), the Sixteen Personality Factor Questionnaire (16-PF) (Braun and LaFaro, 1968; Furnham, 1990), the Myers-Briggs (Furnham, 1990), the Fibro-B (Furnham, 1990), the Eysenck Personality Inventory (EPI) (Eysenck and Eysenck, 1974; Farley, 1970; Gorman, 1968; Salas, 1968; Velicer & Weiner, 1975), the
Psychoticism-Extroversion-Neuroticism (PEN) (Farley & Goh, 1976; Michaelis & Eysenck, 1971), the Neuroticism Scale Questionnaire (NSQ) and the Self-Descriptive Inventory (SDI) (Gordon & Salas, 1965) and, finally, the Differential Emotions Scale (DES) (O'Grady & Janda, 1989).

These studies use very similar approaches to measure the fakeability of these various instruments with two notable differences, the types of subjects studied, and the types of instructions used to elicit faking responses. Three general types of instructions are used. The first is to ask subjects to present themselves in the best possible light, worst possible light, and honestly (Furnham & Craig, 1987; Furnham, 1990). The second is to present subjects with a scenario to respond to, such as trying to appear ill, or trying to get a desirable job. The third is to instruct subjects to assume a specific role, such as, respond like a librarian or a salesman (Velicer & Weiner, 1975).

The effects of sophistication have also been incorporated into faking studies. In a study on the effects of faking on the EPI, Velicer and Weiner (1975) instructed subjects to respond to the questionnaire as if they were a) a salesman, b) a librarian, c) their ideal self, and d) honestly as they are. To evaluate the effect of subject sophistication, subjects were given differing amounts of information about what the test was measuring. They reported that subjects were able to fake the instrument in the intended directions and that subject sophistication had a significant effect on some but not all scales.

Faking studies have used a number of different types of subjects, including college students, high school students, military infantry members, adult and adolescent psychiatric inpatients, forensic inpatients, corrections inmates and job applicants. In general, normal
populations are found to have similar faking responses, however the faking responses of abnormal populations can provide valuable information about their perceptions of normality and abnormality (Furnham, 1986).

Following is a brief summary of several studies selected from the faking research with a number of different instruments including the MMPI, MMPI-2, MCMI, MCMI-II, 16-PF, Myers-Briggs and Firo-B.

Faking studies, reviewed on the MMPI, MMPI-2 focus on the ability of various validity scales to detect subjects instructed to fake good or fake bad. Some of these studies are completed with student populations (Austin, 1992; Cassisi & Workman, 1992; Cofer, et al., 1949; Peterson, et al., 1989), while others have used a combination of students and psychiatric subjects (Bagby & Rogers, 1994; Graham, et al., 1991; Herkov, Archer & Gordon, 1991; Timbrook, Graham, Keiller, & Watts, 1993; Woychysyn, et al., 1992). The results of these studies indicate that the various validity scales are able to detect a majority but not all of the faking profiles.

Faking studies conducted on the MCMI and MCMI-II, like the above MMPI studies, focused primarily on the ability of certain validity scales to detect faking subjects (Bagby, et al., 1991; McNeil & Myer, 1990; Retzlaff, et al., 1991; Wierzbicki, 1993). These studies are conducted with either student subjects (Wierzbicki, 1993), with students and computer-generated scores (Retzlaff, et al., 1991), a combination of students and psychiatric inpatients (Bagby, et al., 1991), or a combination of forensic inpatients and
correctional inmates (McNeil & Myer, 1990). In general, these studies find that subjects are able to influence scores in the intended directions and that validity scales are able to identify some, but not all faking profiles.

Both the MMPI (Wiener, 1948) and the MCMI (Wierzbicki & Howard, 1992) have been evaluated for subtle and obvious items. The notion behind this type of distinction between items is that the more obvious it is what a particular item is measuring, the more susceptible the item is to faking. Studies of the subtle and obvious items on both the MMPI and the MCMI find that obvious items can be used to detect faking. However, they do not significantly out perform other validity scales (McNeil & Myer, 1990; Peterson, et al., 1989). These findings may provide important information for further studies of instruments which do not include validity scales.

Two faking studies of the 16-PF were reviewed. The most recent (Furnham, 1990) used 64 students from majors other than psychology and the other (Braun & LaFaro, 1968) used 154 introductory psychology students. In the Braun and LaFaro study, only fake good and honest conditions were employed. This study also reported on the effectiveness of a built in validity scale, the Motivational Distortion (MD) scale, in distinguishing between faking and control group subjects. Differences on the MD scale were not significant, above the cutoff values used to detect distortions, therefore the scale was not considered effective in detecting faking. Significant differences between the control group and the experimental group were found on eight of the 16 basic test dimensions. In the Furnham study, subjects were instructed to either fake good, fake bad or answer honestly. In this study, the MD scale was not evaluated. Variance between the
three conditions was evaluated for the overall instrument and for each of the 16 basic scales. Significant differences were found between the control group and the fake good group on ten of the sixteen scales. Significant differences were found between the control group and the fake bad group on fifteen of the sixteen basic scales. Significant differences were found between the two experimental groups on fourteen of the scales. Both studies concluded that the 16-PF was highly susceptible to faking. However, not all scales were equally influenced by faking conditions.

The Furnham (1990) study evaluated two additional instruments, the Myers-Briggs Type Indicator (MBTI) and the Fundamental Interpersonal Relations Orientation-Behavior (Firo-B). This study was conducted with a sample of 64 non-psychology major students who, using a Latin Square design, were randomly assigned to one of three sets of instructions for each of the above instruments. The instructions included a fake good condition, a fake bad condition, and an honest (control) condition. The results indicated significant differences between the conditions on all of the 16-PF scales, significant differences on all but one of the Firo-B subscales and significant, although non-linear differences, on all of the MBTI subscales. Furnham concluded that all three instruments were highly susceptible to distortion or faking. It should be noted here that the theoretical constructs on which the MBTI dimensions are based do not evaluate characteristics as desirable or undesirable. However, in the Furnham study, subjects apparently perceived that there was a more desirable response and they were able to manipulate scores in a biased direction.
The review of faking literature clearly indicates that dissimulation/faking can significantly influence the results of self report instruments. Faking studies are an effective method of evaluating the degree to which an instrument may be influenced by faking response bias. Certain item characteristics, such as subtle and obvious items, can influence the degree to which the instrument may be affected by faking response bias. The URICA items were generated using a rational design and, therefore, have greater face validity and tend to be more obvious. Due to these item characteristics, it was predicted that the intentional faking conditions would result in robust differences between the groups. Subject sophistication can also influence the degree to which an instrument may be affected by response bias.

The current study was conducted with a special sample of adults who reported low incomes, limited formal educational experiences, and significant underemployment. It was therefore expected that their level of sophistication would be limited and their ability to intentionally fake on a self report questionnaire would be less robust than that of a higher functioning population. The fakeability of instruments has been found to be generalizable from one population to another, however, faking studies with special populations have provided additional information about the population's perception of normality and abnormality. The current study was conducted with a special population of adults seeking intensive chemical dependency treatment services. The results of this study were intended to provide faking response bias results for the URICA that would generalize to other populations. It can also provide additional information about the unique perceptions of normality and abnormality for this particular population on the URICA dimensions.
Summary

This chapter presented a review of the literature. Chapter Three describes the procedures used to conduct the study.
CHAPTER 3

METHODOLOGY

This chapter describes the procedures and selected methods of data analysis used in conducting this study. The following will be discussed: the research sample; a description of the instruments; the method of data collection; and the method of data analysis.

Sample

The sample for this study consisted of 150 adult substance abusers seeking intensive chemical dependency treatment services at Maryhaven, Inc.. A total of 169 consecutive individuals scheduled for screening/assessment appointments to apply for chemical dependency treatment services at Maryhaven, Inc. were ask to participate in the study. Of the 169 individuals approached to participate, nine refused, three were not administered a questionnaire due to staff oversight, two were unable to participate due to intoxication, two were unable to participate due to an inability to read, and three were
unable to participate due to vision problems. These subjects all were seeking admission to
either the adult inpatient short term rehabilitation program (Dan Cannon Hall) or the adult
day treatment program (Adult Day Treatment).

Demographic data were collected on all of the subjects who agreed to participate
in the study. Of the 150 subjects who consented to participate, one hundred two were
male and forty-eight were female. Tables 3.1 through 3.9 present a summary description
of the sample by race, age, education level, annual income, number of dependents, marital
status, living arrangement, major problem substance, and pattern of employment.

<table>
<thead>
<tr>
<th>Race</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>61</td>
<td>41</td>
</tr>
<tr>
<td>Black</td>
<td>86</td>
<td>57</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

n=149

Table 3.1 Description of sample by race.
The racial composition of the sample consisted of fifty-seven percent Black, forty-one percent White and one percent Other and one case missing. It is notable that the largest portion of the sample report that they are Black.

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 22</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>23 to 30</td>
<td>55</td>
<td>37</td>
</tr>
<tr>
<td>31 to 40</td>
<td>59</td>
<td>39</td>
</tr>
<tr>
<td>41 to 59</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>n=150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2 Description of sample by age.

The composition of the sample by age was seventy-six percent between the ages of twenty-three and forty, with only seven percent below the age of twenty-three and sixteen percent above the age of forty.
<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 12th grade</td>
<td>37</td>
<td>26</td>
</tr>
<tr>
<td>Completed 12th grade</td>
<td>82</td>
<td>58</td>
</tr>
<tr>
<td>More Than 12th grade</td>
<td>22</td>
<td>16</td>
</tr>
</tbody>
</table>

n=141

Table 3.3 Description of sample By Education Level

Twenty-six percent of the sample had less than a twelfth grade education and only sixteen percent reported formal education beyond the twelfth grade. This is considered a characteristic of interest since a positive correlation between subject’s sophistication and the ability to fake has been documented in previous research with other instruments (Velicer & Weiner, 1975).
<table>
<thead>
<tr>
<th>Annual Income</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $1,000.</td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td>1,000. to 10,000.</td>
<td>85</td>
<td>61</td>
</tr>
<tr>
<td>11,000. to 20,000.</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>21,000. to 30,000.</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>100,000. *</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

n=140

Table 3.4 Description of sample by income level. * There are no cases between $30,000. and $100,000. annual income. Subjects gave income in one thousand dollar increments and income was grouped for summary presentation.

The sample consisted of primarily low income individuals with eighty-one percent reporting annual incomes below $10,000. and ninety-five percent below $20,000. annually.
<table>
<thead>
<tr>
<th>Number of Dependents</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>29</td>
<td>20</td>
</tr>
<tr>
<td>1</td>
<td>65</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

n=145

Table 3.5 Description of sample by number of dependents.

Over half the subjects, sixty-five percent reported zero or one dependent. This number of dependents appears low considering seventy-six percent of the sample were between the ages of twenty-three and forty.
<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Married</td>
<td>72</td>
<td>49</td>
</tr>
<tr>
<td>Married</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>Separated</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>Divorced</td>
<td>40</td>
<td>27</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

n=148

Table 3.6 Description of sample by marital status.

Nearly half, forty-nine percent, of the subjects reported that they have never been married. Another thirty-seven percent report that they are either separated, divorced or widowed. Remarried was also a category, however, none of the subjects identified themselves as remarried. This indicates that only fifteen percent of the subjects reported themselves as currently in a marriage.
Table 3.7 Description of sample by living arrangement for the past three years.

<table>
<thead>
<tr>
<th>Living Arrangement Past Three Years</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Sexual Partner &amp; Children</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>With Sexual Partner Alone</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>With Children Alone</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>With Parents</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>With Family</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>With Friends</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Alone</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Controlled Environment</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>No Stable Arrangement</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>n=150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Only thirty-three percent of the subjects report that their usual living arrangement is with a sexual partner. It is also notable that twenty percent of the subjects reported that they had no stable living arrangements or they were in a controlled environment.
<table>
<thead>
<tr>
<th>Major Problem Substance</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No problem</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Alcohol</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>Sedative/Hypnotic/Tranquilizer</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cocaine</td>
<td>57</td>
<td>39</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Alcohol and one or more other substance</td>
<td>34</td>
<td>23</td>
</tr>
<tr>
<td>More than one substance other than alcohol</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

n=145

Table 3.8 Description of sample by major problem substance.

The largest portion of the sample, thirty-nine percent, reported that cocaine is it’s major problem substance. The second largest group, twenty-four percent, report that alcohol is it’s major problem substance. Another sizable portion of the sample, twenty-five percent, report that regular use of more than one substance is it’s major problem. In this latter group, by far the largest portion, twenty-three percent, reported that alcohol is one of the major problem substances. When this group is combined with the alcohol only group forty-seven percent of the sample reported that alcohol is a major problem substance.
Table 3.9 Description of sample by pattern of employment for the past three years.

Fewer than half the subjects, forty-three percent, reported a pattern of full-time employment. A sizable portion, thirty-eight percent, reported either irregular part-time employment, unemployment, or they were in a controlled environment.

The Dan Cannon Hall Program is a twenty-five bed adult, inpatient, coed chemical dependency treatment program with a fourteen to thirty-five day length of stay. Admission criteria were based upon a substance dependency diagnosis according to diagnostic criteria from the American Psychiatric Association's Diagnostic and Statistical Manual IV Edition (DSM IV), a medical necessity, and a variety of psychosocial considerations. Overall, admissions tend to be sixty percent male and forty percent female, sixty percent African American, and forty percent Caucasian. The drugs of choice
range across Central Nervous System (CNS) depressants, CNS stimulants, opiate narcotics and hallucinogens. The majority of patients admitted identify crack cocaine as their drug of choice.

The African American and Appalachian Adult Male Day Treatment Program is a partial hospitalization model. Admission criteria are similar to the inpatient program with the addition of race and cultural criteria. Clients are transported to and from the facility where they remain from 8:00 a.m. to 5:00 p.m. Monday through Friday and 9:00 a.m. to 1:00 p.m. on Saturdays. All admissions are male, eighty percent are African-American, and twenty percent are Caucasian Appalachians. The program consists of three phases of declining restrictiveness. The first phase is four weeks in duration in which clients attend treatment six days a week. The second phase is also four weeks in duration with clients attending treatment for three hours three days a week. The third phase is six months in duration with clients attending treatment for three hours one time a week. This program admits approximately ten patients to each of the initial phase each month.

Clients seeking services are a combination of self referral and coerced. Referrals can be made to either of these programs from a variety of sources including, but not limited to; word of mouth; family members; members of Alcoholics Anonymous and other self-help group members; clergy; health care professionals in the community; children's services organizations; and federal, common pleas and municipal court judges or probation officers. Approximately thirty percent are court ordered with the remaining seventy percent referred by a combination of the other sources.
The primary mission of Maryhaven, Inc. is to provide substance abuse services to working poor and medically indigent individuals who are unable to access services through the private sector. Maryhaven, Inc. is a private not for profit organization which receives funds from a number of public sources. No person is refused services based on his or her ability to pay. As a result of this mission, the sample for this study was expected to have a greater representation of individuals in a lower socioeconomic class.

Instrumentation

The Subject Demographic Form. The subject demographic form was developed for use in this study and included basic demographic variables intended for use in describing the sample. The categories included are: age, date of birth, gender, race, education level, annual income level, number of dependents, marital status, usual living arrangement (past three years), drug of choice, and usual employment pattern (past three years). These items were not included as variables in the current study. The coding within each category is based on the Addiction Severity Index (McLellan, et al., 1985), since many of the subjects were administered this instrument as a part of the assessment and admission process for the programs from which they were seeking services. The categories were used to simplify the demographic data recording process and to aid in comparing the current population with other populations studied using the Addiction Severity Index.

The University of Rhode Island Change Assessment (URICA). The dependent variables for the current study were the scores on the subscales of the URICA. A
description of the development of the instrument appears in Chapter Two and a brief
description of the psychometric properties of the instrument is presented here. The
URICA is a thirty-two item self report questionnaire. Subjects respond to each item using
a five-point Likert type scale in which one equals strong agreement and five equals strong
disagreement. The questionnaire takes approximately ten minutes to complete.

The stages of change are operationalized through this instrument which was
developed by McConnaughy, DiClemente, Prochaska, and Velicer (1983). The
instrument was developed using a rational design as described by Edwards (1970).

The thirty two items included in the URICA represent four of the originally five
stages of change. During the development of the instrument the Decisional Stage (now
called the Preparation Stage) was dropped in the second stage of analysis because most of
its items were loading on other components in the principle components analysis and
therefore it was determined to not be measuring a distinct stage. The authors later
reported that they considered this to be an error in judgment and the preparation stage
continues to be considered in the five stage model, however, the URICA does not include
a subscale specifically for this stage.

Details of the principal components analysis on the 32 X 32 matrix of interitem
correlations were reported. Eight items loaded on each of four components with no items
loading significantly on more than one component. Varimax rotated component patterns
indicate factor loadings of .58 to .82 for component one, .69 to .77 on component two,
.61 to .79 for component three, and .54 to .74 for component four. These four
components account for fifty-eight percent of the variance.
Internal consistency reliability coefficients were evaluated for each of the eight item subscales. The Coefficient Alpha's reported for each of the subscales were: Precontemplation, .88, Contemplation, .88; Action, .89; and Maintenance, .88. The unweighted sum of each of the eight items on each subscale was used to calculate the four scale scores for each subject. The means and standard deviation and correlation's between the four scales were calculated. These scores were converted to standardized t-scores with a mean of fifty and a standard deviation of ten.

A hierarchical cluster procedure was performed to determine if subjects could be classified into a small number of homogenous subgroups. A nine cluster solution was interpreted which together accounted for 140 of the total 155 subjects. Each of these nine clusters was theoretically interpreted as a clinical change profile (McConnaughy, et al., 1983).

In 1989 a follow up evaluation of the URICA was conducted using a population presenting with serious psychiatric disturbances. In this study 327 adult outpatients completed the questionnaire under conditions similar to the previous study. This study reports findings consistent with the original study. The authors reported Cronbach's coefficient alphas for the four scales: Precontemplation, .79; Contemplation, .84; Action, .84; and Maintenance, .82. Cluster analyses of the subjects scores resulted in an eight cluster solution which was very similar to the nine cluster solution reported in the earlier study (McConnaughy, et al., 1989).

In 1990 the URICA was evaluated with a sample of 224 adults entering outpatient alcoholism treatment. This study used similar methods of data collection and analysis as
the two previous studies. Cronbach's Alpha was used for internal consistency and reported as Precontemplation, .69; Contemplation, .75; Action, .82, and Maintenance, .80. In the principle components analysis the factor structure replicated the earlier studies, however, several items had weak and inconsistent loadings and therefore the weakest item in each scale was dropped for all subsequent data analysis. The cluster analysis of scale scores produced a five cluster solution. The five clusters were very similar to five of the clusters reported in the earlier studies and the results were considered consistent with earlier findings (DiClemente & Hughes, 1990).

Procedures

Individuals contact Maryhaven, Inc. through a telephone number which is listed in the public telephone directory. The calls are answered by a receptionist who then routes calls according to a brief screening. Adult individuals who are intoxicated or are at risk for acute withdrawal are routed to the detoxification unit. Individuals who are seeking low intensity outpatient services are routed to the outpatient services area, and adults who are seeking inpatient or intensive outpatient service are directed to the Dan Cannon Hall (DCH) assessment area. The latter individuals make up the sample for the current study. The receptionist in the assessment area schedules the individual for the next available screening appointment. If the individual is being referred by a professional who has already completed a screening the individual is scheduled for the next available assessment appointment. All clients seeking treatment are encouraged to immediately begin attending a preadmission support group which meets twice weekly.
When potential clients arrived for either their screening or assessment appointment they were greeted by one of the assessment counselors. At this point they were requested to participate in the study. If they agreed to participate, they were then escorted to a private testing room and given the URICA with one of the three sets of instructions. The instructions were presented in written form and read aloud to the participant. The participants were given an envelope in which to place the questionnaire after it had been completed. The participant was informed that the questionnaire would not be reviewed by the interviewer and that the results would not be used in their evaluation.

Following completion of the URICA, the subjects continued on with the assessment process according to the normal agency practices. Their treatment was not influenced in any way by their participation or lack of participation in the current study. Following completion of the screening or assessment, the interviewer completed the demographics form and placed it in the envelope along with the URICA. The envelope containing both the URICA and the demographic form were placed in a designated mailbox for the investigator. The URICA and the Demographics Form used only a subject number for identification, no names were used on the forms. The data from the URICA and the Demographic Form were then entered into SPSS version 6.1 for Windows.

Subjects were randomly assigned to one of the three conditions using a randomized blocking technique. The first client to arrive was assigned to a condition by the throw of a six sided dice. A one or a three resulted in assignment to the control condition, a two or a four resulted in assignment to the fake good condition, and a five or
a six resulted in assignment to the fake bad condition. The second client who arrived was then assigned to one of the two remaining conditions using the method and the third client to arrive was assigned to the remaining condition. This same procedure was used to assign each of the remaining blocks of three subjects as they arrived. Following are the instructions given in each of the conditions:

X₁ Fake good: "When completing this questionnaire we would like you to answer the questions in order to give a really good impression of yourself; that is, to present yourself in the best possible light. You need not be honest in your answers."

X₂ Fake bad: "When completing this questionnaire we would like you to answer the questions in order to give a really bad impression of yourself; that is, to present yourself in the worst possible light. You need not be honest in your answers."

X₃ Control: "When completing this questionnaire we would like you to be as honest as possible; that is, present yourself as you really are."

Research Design

The current study utilized a Randomized Posttest-Only Control Group Design.

Treatment Groups

R X₁ O₁

R X₂ O₂

Control Group R X₃ O₃
In this study, evaluating the causal effect of intentional faking response on the dependent variables, it was important to control for threats to validity which might lead to erroneous conclusions. The Randomized Posttest-Only Control Group Design controls many threats to internal validity (Fraenkel & Wallen, 1993). The use of random assignment controls for threats due to differences in subject characteristics, maturation, history instrumentation and statistical regression. No pretest was used which eliminated the threat of testing. The treatment is a one shot only design with a duration of approximately ten to fifteen minutes, therefore, mortality is not a significant threat. All participants were asked to complete the same questionnaire under the same conditions, with the exception of the instructions, therefore, the Hawthorn Effect did not present a significant threat. Interviewers gave instructions and responded to questions using a standard script in order to minimize implementor threats.

Data Analysis

The subject’s responses to each of the items within each subscale were used to calculate a subject’s mean score for each subscale. The Precontemplation Subscale consist of items 1, 5, 11, 13, 23, 26, 29, and 31. The Contemplation Subscale consist of

\[ X_1 = \text{Fake bad instructions} \quad O_1 = \text{URICA} \]
\[ X_2 = \text{Fake good instructions} \quad O_2 = \text{URICA} \]
\[ X_3 = \text{Honest response instructions} \quad O_3 = \text{URICA} \]
items 2, 4, 8, 12, 15, 19, 21, and 24. The Action Subscale consist of items 3, 7, 10, 14, 17, 20, 25, and 30. The Maintenance Subscale consist of items 6, 9, 16, 18, 22, 27, 28, and 32 (see appendix for actual items).

The subscale mean scores from the three groups were evaluated using a one way analysis of variance (ANOVA) to test for effects of the independent variable (type of instructions) on the dependent variables (scores on each of the URICA subscales). To test the hypotheses regarding differences on subscale scores between specific pairs of groups, the Tukey's b test for post-hoc comparison of means was used.

Summary

This chapter has described the procedures used in the completion of the study.

Chapter Four presents the findings.
This chapter presents the findings of the study. Data are presented as they relate to each of the research questions posed in the statement of the problem. The data are first presented in table form and then discussed in the relevant text.

Comparison Of Group Means

The hypotheses for the current study were based upon a comparison of the four subscale mean scores for each of the groups. Type of instruction (fake bad, fake good or answer honestly) was the only variable used to classify subjects to different groups, therefore, a one way ANOVA in the SPSS for Windows version 6.1 was used for this analysis. ANOVA examines the variability of observations within each group and the variability between the groups. Based upon these two estimates of variability, conclusions are drawn about group differences in population means. A significant ANOVA supports the hypothesis that two or more groups are from populations with different means.
Table 4.1 above presents the findings for the two treatment groups (subjects instructed to fake) and the control group (subjects instructed to respond honestly) on each of the four URICA subscales. The ANOVA's are highly significant on each of the four subscales indicating that type of instructions caused a difference between groups. The greatest difference (F=18.32) is on the Contemplation Subscale and the smallest difference (F=6.26) is on the Maintenance Subscale. The Precontemplation Subscale has an F Ratio of 8.75 at a significance level of less than 0.001, the Contemplation Subscale has an F Ratio of 18.32 at a significance level of less than 0.001, the Action Subscale has a F Ratio of 16.21 at a significance level of less than 0.001, and the Maintenance Subscale has a F
Ratio of 6.26 at a significance level of less than 0.01. Therefore, the null hypothesis that the three groups are equal is rejected on each of the four subscale dimensions.

<table>
<thead>
<tr>
<th></th>
<th>Fake Bad (n=50)</th>
<th>Fake Good (n=50)</th>
<th>Control (n=50)</th>
<th>Post hoc (Tukey’s b) comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precont.</td>
<td>2.77</td>
<td>2.27</td>
<td>1.89</td>
<td>• *</td>
</tr>
<tr>
<td>Cont.</td>
<td>3.17</td>
<td>4.11</td>
<td>4.44</td>
<td>• *</td>
</tr>
<tr>
<td>Action</td>
<td>3.10</td>
<td>3.97</td>
<td>4.03</td>
<td>• *</td>
</tr>
<tr>
<td>Maint.</td>
<td>3.07</td>
<td>3.53</td>
<td>3.80</td>
<td>• *</td>
</tr>
</tbody>
</table>

* Indicates that the difference in mean scores for the two groups compared in the column are significant at the 0.05 level. (p<0.05)

Table 4.2: Post Hoc Comparisons for the URICA Subscales

The significant F values reported for the ANOVA indicate only that the population means represented by the three groups are not all equal. Post hoc comparisons are required to test the study's hypotheses about the specific differences in mean scores between pairs of groups. When many comparisons are made using the same means the probability of finding significant differences, even where there is no difference, increases.
To avoid this risk of type 1 error, the Tukey’s b multiple comparisons procedure was used. The Tukey’s b test adjusts for the number of comparisons by requiring a larger difference between pairs, as the number of comparisons increases, to achieve significance. Post hoc analysis findings are presented in Table 4.2 above and discussed in the context of specific predictions in the text below.

**Fake good and Fake bad Post Hoc Comparisons**

The post hoc comparisons between the fake good group and the fake bad group are all significant at the p<0.05 level and in the predicted direction. These findings support the study’s specific predictions that subjects instructed to fake good would produce higher scores on the Contemplation, Action, and Maintenance subscales and lower scores on the Precontemplation subscale when compared to scores on the same subscales with subjects instructed to fake bad.

**Faking and Control Group Post Hoc Comparisons**

The post hoc comparisons indicate that the differences between the scores of subjects instructed to fake bad and the scores of subjects instructed to answer honestly (control group) are all significant at the p<0.05 level and in the predicted direction. These findings support the study’s specific predictions that subjects instructed to fake bad would produce lower scores on the Contemplation, Action, and Maintenance subscales and higher scores on the Precontemplation subscale when compared to scores on the same subscales with subjects instructed to answer honestly.
The post hoc comparisons between the scores of subjects instructed to fake good and the scores of subjects instructed to answer honestly (control group) are not significant at the $p<0.05$ level. None of the predictions regarding differences between subscale mean scores under these two types of instructions are supported.

Profile Patterns And Shape

The mean scores on each of the four subscales can be combined to form a profile for a group of subjects. A profile pattern was predicted for each group. The specific profile patterns indicated by the mean score findings are presented graphically in Table 4.3 and discussed in the text below.

The profile pattern for the fake good group supports the predictions with the highest subscale mean scores on Contemplation (4.11), Action (3.97), and Maintenance (3.53), and the lowest subscale mean score on Precontemplation (2.27).

The profile pattern for the fake bad group does not support the predictions. The highest subscale mean score was predicted to be on the Precontemplation subscale with the other three scales having lower mean scores by comparison. The findings are that the highest subscale mean scores are on the Contemplation (3.17), Action (3.10), and Maintenance (3.07) and the lowest mean score is on Precontemplation (2.77).

The profiles for the groups differ in elevation, however the shape of the profiles for the three groups are the same. For each group the highest group mean score is on the
Table 4.3. Graphic representation of the subscale mean scores for each of the groups on the four URICA subscales (n=150).
Contemplation Subscale, the second highest score is on the Action Subscale, the third highest score is on the Maintenance Subscale and the lowest group mean score is on the Precontemplation Subscale.

Linear Relationships

The study predicted a linear relationship between the three groups based upon the type of instruction. This prediction was only partially supported. The specific prediction was for a linear relationship on each of the subscales for the three groups with the lowest scores for Contemplation, Action, and Maintenance in the fake bad group; for the highest scores on these three subscales in the fake good group; and for the control group scores to fall in the range between the fake bad and fake good group’s scores on each subscale. It was predicted that on the Precontemplation subscale, the fake bad group would have the highest mean score, the fake good group, the lowest mean score and, again, for the control group mean score to fall between the scores of the fake bad and fake good groups.

The prediction was supported for the relationship of scores between the fake bad group and the other two groups. However, the relationships of mean subscale scores for the fake good and control groups were not supported. The differences between these two groups were not significant at the p<0.05 in the post hoc comparison.

Summary

This chapter presented the findings of the study. Chapter 5 includes a summary, conclusions, and recommendations for further study.
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This final chapter includes a summary of the procedures and findings, conclusions drawn from the data, and recommendations for further study.

Summary

A large number of individuals in our society are negatively affected by substance abuse. Most substance abuse prevention and intervention programs are designed to either prevent substance abuse problems from developing or help individuals who have substance abuse problems to take immediate action to address their problem. This leaves a large portion of substance abusers who have already developed a problem, but who are not ready to take action, outside of the impact of existing programs. Even for those substance abusers who do enter programs, many are not ready to respond to the highly action oriented programs and may not benefit from treatment.
The Stages of Change Model provides a promising alternative for helping individuals with a wide range of problems. This model provides a schema for matching interventions to an individual’s current status in the change process. The University of Rhode Island Change Assessment (URICA) has been used successfully to explore and describe groups of individuals with a wide range of problem behaviors. The instrument has been found to have sound psychometric properties. A common complaint against the use of self-report questionnaires is that subjects may lie or fake their responses, thus bringing the validity of the instruments into question. No evaluation of the effect of intentional faking response bias on the URICA has been reported to date.

It was the purpose of this study to measure the effect of intentional faking on URICA test scores in a population of individuals seeking admission to an adult inpatient or day-treatment chemical dependency treatment program. The major research questions were: 1) To what extent are subjects able to fake on each of the URICA subscales? 2) What is the profile or template of the typical fake response? and 3) What are the implications of faking on the URICA for research and application of the Stages of Change Model in the field of chemical dependency treatment?

One hundred fifty (n=150) subjects were randomly assigned to one of three conditions. Subjects were instructed to follow one of three sets of instructions depending on the group to which they were assigned. Subjects in the fake bad condition (n=50) were instructed to make themselves look bad, that is to present themselves in the worst possible light with no need to be honest; subjects in the fake good condition (n=50) were instructed to make themselves look good, that is to present themselves in the best possible
light, with no need to be honest; and subjects in the control condition (n=50) were instructed to respond honestly, that is to present themselves as they really are. The results of the three groups were analyzed using a one-way ANOVA on each of the URICA’s four subscales and post-hoc comparisons were used to test hypotheses regarding differences between specific pairs of group subscale means.

The findings of the study indicated that type of instruction had a significant effect on the subscale scores when the three groups were compared. Individuals in the fake bad condition were able to manipulate scores on each of the four subscales in the direction predicted by the study. No significant differences were found between the fake good and control group scores.

Conclusions

Based on the findings, a number of conclusions can be drawn. First, response bias had a significant effect on all of the URICA subscales. Individuals who were instructed to misrepresent themselves on the URICA were able to manipulate scores on each of the subscales. The highly significant ANOVA’s reported on each of the subscale analyses support the conclusion that the intentionally faked response bias caused a significant difference between the three groups. These findings are consist with previous research which has demonstrated significant effects of intentional faking instructions on a number of different instruments including the 16 PF, the Myers-Briggs Type Indicator, and the FIRO-B (Furnham, 1990). In settings where the URICA is used to collect data on large
numbers of individuals for the purpose of evaluating or describing a population, this type of response bias could cause misinterpretation of the data and erroneous conclusions about the population.

Two additional conclusions can be based on the findings of the post hoc comparisons. One of these two conclusions is based on a comparison of the fake bad group with both the fake good group and the control group. The other is based on the findings from comparison of the fake good group and the control group.

The second conclusion is based on the findings that subjects who are motivated to make themselves look bad can directly manipulate their scores on each of the URICA subscales. The fake bad response bias caused predictable and highly significant differences between the fake bad group and both the fake good group and the control group on each of the subscales. The study made specific predictions about the effect of type of faking on each of the subscales. The differences were all in the predicted direction on each of the subscales. The Precontemplation Subscale measures the degree to which individuals admit to having a problem. Higher scores on this subscale indicate greater denial of having a problem while lower scores indicate greater acknowledgment of having a problem. The study correctly predicted that individuals instructed to fake bad would have higher scores on this subscale indicating a greater degree of denial of problems than subjects instructed to either fake good or respond honestly.

The study predicted correctly that subjects instructed to fake bad would have lower scores on the Contemplation subscale when compared with subjects instructed to either fake good or respond honestly. Higher scores on this subscale indicate serious
consideration of having a problem and the consequences related to the problem. These higher scores can also indicate intention to take action to cope with the problem. On the other hand, lower scores on this subscale indicate a lacking of both an awareness of the consequences of the problem and of an intention to take action. The fake bad group score indicates less awareness of having a problem and intentions to take action.

The study predicted correctly that subjects instructed to fake bad would have lower scores on the Action subscale when compared to the scores of subjects instructed to either fake good or respond honestly. Higher scores on this subscale indicate that an individual is currently taking action to cope with his/her problem. Lower scores on this subscale indicate a lack of current activity to cope with the problem. The fake bad group scores indicate a lack of action to cope with their problem while the fake good and control group scores both indicate current action directed at coping with their problem.

The study also predicted correctly that subjects instructed to fake bad would have lower scores on the Maintenance subscale when compared to the scores of subjects instructed to either fake good or respond honestly. Higher scores on this subscale indicate that an individual is involved in or interested in activities related to maintaining or improving upon gains already achieved in coping with a problem. The fake bad group scores indicate a lack of interest in activities aimed at maintaining change or avoiding a relapse, while the fake good and control group scores indicate a greater interest in maintaining change and avoiding relapse.

When subjects are instructed to fake bad they must make a value judgment regarding what is desirable and what is undesirable. The predictions were based on what
was anticipated to be the social desirability or social undesirability of each of these scales.

The findings indicate that when subjects are considered in a group, they perceive denial of problems as less desirable, and admission of a problem, intention to take action, active coping, and maintaining gains as more desirable.

The implication of this conclusion is that when subjects are motivated to intentionally look bad on the URICA it is possible to manipulate scores in a predictable direction. In settings where the URICA is used to collect data on large numbers of individuals for the purpose of evaluating or describing a population, fake bad response bias could cause misinterpretation of data on each of the subscales and erroneous conclusions about the population. In applied settings, this same type of misinterpretation could lead to erroneous conclusions about individuals evaluated using the URICA.

The URICA alone is not an adequate assessment of stage of change in settings where there is a potential motivation for subjects to misrepresent themselves. Additional data should also be considered, such as historical data related to stage of change, and general validity of the subject’s self reported information. In this area, additional instruments with validity scales, measures of test-taking attitude or social desirability responding, could be helpful. Development and use of historical criterion based measures of stage of change along with the URICA could also be used.

The third conclusion, drawn from the post hoc comparisons, is based on the finding that intentional fake good instructions did not cause a significant difference in group scores between the fake good and control groups on any of the URICA subscales. There are a number of possible explanations for this finding.
First, it is possible that for this population there simply is no difference between the honest and the desirable response. This lack of significant difference could be a result of an interaction between subject characteristics and the theoretical constructs the instrument is measuring. The sample for this study was drawn from a special population of individuals seeking intensive chemical dependency treatment services. By very definition of the stages of change, it is likely that the sample was homogeneous on the stage of change dimensions. That is, it is likely that many individuals seeking treatment would be in a stage of change congruent with that type of activity, probably the preparation stage of change.

Second, the subjects in the control group may have been faking good. While this possibility can not be ruled out in the current study, it is considered highly unlikely. Subjects in the control group would have no apparent motivation to fake good since test scores were not considered in their evaluation.

Third, the URICA may be resistant to intentional fake good response bias. This explanation also can not be ruled out in the current study, however, in view of the robust fake bad results it is considered unlikely. If items are obvious enough to be faked in one direction, it is unlikely that the same items would prevent faking in the opposite direction.

Finally, it is possible that due to the rational design of the instrument it is so obvious which are the desirable responses that individuals responding honestly simply chose the desirable response as a form of self deception that is common and expected as a part of normal self esteem.
The current study is limited by the special population from which the sample was drawn. It is entirely possible that other populations may have responded differently to the conditions of this study.

The forth conclusion was that the group profile shapes can not be used to detect faking. This conclusion was drawn from a comparison of the group profile shapes under each of the three conditions. The study had predicted specific shapes for each of the three groups. The findings indicated that although the fake good group and the control group had the predicted profile shapes, they were not significantly different by comparison. The fake bad group profile shape did not follow the prediction. Indeed the findings indicate that the three group profile shapes were the same with the only difference being in the evaluations of the individual subscales.

The final conclusion was that extreme scores are not adequate for detecting faking profiles. The relationship between the three groups profile scores is not linear. The study had predicted that the three groups profile scores would have a linear relationship with the most extreme scores, in either direction on each subscale, in one of the faking conditions. The fake bad group profile elevations did differ from the other groups in the predicted direction on each of the subscales, however, no significant differences were found between the fake good and control conditions.

**Recommendations For Further Research**

Several recommendations can be made for further research on response bias with the URICA. First, future research should investigate differences within the different
conditions. Cluster analysis and/or item analysis would give greater insight into what is perceived as desirable and undesirable in the stage of change context. This type of analysis could also answer questions about different possible fake bad profiles. The current study was not designed to investigate differences within the different conditions. Several of the items also combine two elements which might add to the ambiguity of the item. This issue should be explored in the item analysis in addition to, measuring the social desirability of each item.

Second, further study should investigate the lack of significant differences between groups of subjects answering honestly and those intentionally faking good. Replications of the current design with other populations are needed to clarify what aspects of these finding are unique to this population. Stage of change by definition is not a stable trait. The subjects for the current study were all individuals seeking intensive chemical dependency treatment services and therefore it is expected that they would not represent a normal distribution across the stages of change. Individuals in different settings and stages are likely to have different perceptions of what is desirable and therefore might produce different results.

Third, future research should investigate different faking conditions, such as faking while attempting to avoid detection, and faking for a specific goal, such as gaining admission to a treatment program to avoid negative legal or employment consequences. The current study has established that intentional fake bad bias caused an effect on the subscale scores when subjects were instructed to make themselves look bad.
Fourth, future research should explore interactions between intentional faking instructions and other client variables such as drug of choice, race or cultural background and educational level. The current study established that intentional faking is achievable on the URICA. Exploration of the above interactions would provide more information for identifying intentional fake profiles and, more important, a better understanding of what is considered desirable in the context of the stages of change.

Fourth, future research should evaluate the degree to which socially desirable responding is affecting URICA scores in actual assessment settings. One way of measuring this would be to administer a measure of socially desirable responding, such as the Marlowe-Crowne (Crowne & Marlowe, 1960), along with the URICA and evaluate the correlations between the two instruments.

Fifth, future research should evaluate the URICA items. Social desirability ratings of each individual item would give greater insight into which items are most effected by social desirability bias. Special attention should be given to items which contain more than one statement. These items produce ambiguity and may have a confounding effect on establishing the reliability of the instrument.

Sixth, future research should develop internal validity scales for a modified version of the URICA or validation protocols to be used with the URICA. If the URICA is going to be used for individual assessment and treatment planning in a chemical dependency setting, addition guidelines should be developed to control for or measure the effects of response bias.
Finally, development of criterion-based classification algorithms, or empirically derived self-report assessments of change specifically for use with chemically dependent populations, should be developed. These types of measures are better able to minimize the risk of erroneous conclusions about individuals and populations caused by response bias.

Although the current study found no evidence that the URICA is effected by intentional fake good response bias, clearly the instrument is not resistant to efforts to manipulate scores in an undesirable direction. When using the URICA to evaluate individuals or to describe populations, caution should be used in interpreting results that may have been affected by individuals motivated to malinger or appear worse than they actually are.
BIBLIOGRAPHY


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APPENDIX A

URICA ITEMS

1. As far as I'm concerned, I don't have any problems that need changing.
2. I think I might be ready for some self-improvement.
3. I am doing something about the problems that had been bothering me.
4. It might be worthwhile to work on my problem.
5. I'm not the problem one. It doesn't make much sense for me to be here.
6. It worries me that I might slip back on a problem I have already changed, so I am here to seek help.
7. I am finally doing some work on my problem.
8. I've been thinking that I might want to change something about myself.
9. I have been successful in working on my problem but I'm not sure I can keep up the effort on my own.
10. At times my problem is difficult, but I'm working on it.
11. Being here is pretty much of a waste of time for me because the problem doesn’t have to do with me.

12. I’m hoping this place will help me to better understand myself.

13. I guess I have faults, but there’s nothing that I really need to change.

14. I am really working hard to change.

15. I have a problem and I really think I should work on it.

16. I’m not following through with what I had already changed as well as I had hoped, and I’m here to prevent a relapse of the problem.

17. Even though I’m not always successful in changing, I am at least working on my problem.

18. I thought once I had resolved the problem I would be free of it, but sometimes I still find myself struggling with it.

19. I wish I had more ideas on how to solve my problem.

20. I have started working on my problems but I would like help.

21. Maybe this place will be able to help me.

22. I may need a boost right now to help me maintain the changes I’ve already made.

23. I may be part of the problem, but I don’t really think I am.

24. I hope that someone here will have some good advice for me.

25. Anyone can talk about changing; I’m actually doing something about it.

26. All this talk about psychology is boring. Why can’t people just forget about their problem.

27. I’m here to prevent myself from having a relapse of my problem.
28. It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.

29. I have worries but so does the next guy. Why spend time thinking about them?

30. I am actively working on my problem.

31. I would rather cope with my faults than try to change them.

32. After all I had done to try and change my problem, every now and again it comes back to haunt me.
APPENDIX B

FAKE GOOD INSTRUCTIONS

When completing this questionnaire we would like you to answer the questions in order to give a really good impression of yourself; that is, to present yourself in the best possible light. You need not be honest in your answers.

Remember this questionnaire will be kept strictly confidential and it will not be used to evaluate you or effect your treatment in any way.
APPENDIX C

FAKE BAD INSTRUCTIONS

When completing this questionnaire we would like you to answer the questions in order to give a really bad impression of yourself; that is, to present yourself in the worst possible light. You need not be honest in your answers.

Remember this questionnaire will be kept strictly confidential and it will not be used to evaluate you or effect your treatment in any way.
HONEST INSTRUCTIONS

When completing this questionnaire we would like you to be as honest as possible: that is, present yourself as you really are.

Remember this questionnaire will be kept strictly confidential and it will not be used to evaluate you or effect your treatment in any way.
APPENDIX E

SUBJECT DEMOGRAPHICS FORM

1. Research Case #: .........................................................

2. Subject initials: ............................................................

3. Interviewer Name/#: ................................................................ /____

4. Date: .............................................................................


6. Age: .................................................................

7. Date Of Birth: ............................................................

8. Gender................................. 1. Male 2. female

2. Black 4. Indian 6. Other

10. Education Level: ................ years ___ mos. ___
    (Highest Grade Completed, GED = 12)

11. Annual income for the past year, to the nearest thousand: $ _______

12. Number of Dependents: .... (# including self, on 1994 Tax return if filed) __________

13. Marital Status: ..............................
    1-Married 3-Widowed 5-Divorced
    2-Remarried 4-Separated 6-Never married

14. Usual living arrangements (past 3 years): ______
    1-With sexual partner & children 6-With friends
    2-With sexual partner alone 7-Alone
    3-With children alone 8-Controlled environment
    4-With parents 9-No stable arrangement
    5-With family

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15. Alcohol/Drugs (route of administration 1. oral 2. nasal 3. smoking 4. non-injection 5. IV)

<table>
<thead>
<tr>
<th>Route of adm.</th>
<th>Past 30 days</th>
<th>Lifetime</th>
<th>Route of adm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Alcohol (any use at all)</td>
<td></td>
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</tr>
<tr>
<td>02 Alcohol (to intoxication)</td>
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<tr>
<td>03 Heroin</td>
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<tr>
<td>04 Methadone</td>
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<tr>
<td>05 Other Opiates/Analgesics</td>
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<td></td>
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<tr>
<td>06 Barbiturates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07 Sedative/Hypnotic/Tranquilizer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08 Cocaine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 Amphetamines</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10 Cannabis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Hallucinogens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Inhalants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 More than 1 substance per day (including alcohol)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 According to the client, which substance is the major problem?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. Usual employment pattern, past three years:

1. Full-time (35+ hours) 5. Service
2. Part-time (regular hours) 6. Retired/Disability
3. Part-time (irregular hours) 7. Unemployed
4. Student 8. In controlled environment

17. Was this assessment prompted or suggested by the criminal justice system? 0-no 1-yes

18. Are you on probation or parole? 0-no 1-yes

19. Do you have any charges pending? 0-no 1-yes

Stage Assessment:

20. Are you currently using? 0-no 1-yes

21. Are you seriously considering quitting within the next six months? 0-no 1-yes

22. Are you planning to quit using in the next 30 days? 0-no 1-yes

23. Have you had a period of voluntary complete abstinence in the past year? 0-no 1-yes

24. How long have you currently been completely abstinent (voluntary)? ___/_____/_____

25. Rating of client's current stage of change based on algorithm below (circle one):

1 = Precontemplation 2 = Contemplation 3 = Preparation 4 = Action 5 = Maintenance

1. Precontemplation stage individuals are those who respond that they are currently using and are not seriously considering quitting in the next six months. (yes to 20, no to 21)
2. *Contemplation stage* individuals are also currently using but are seriously considering quitting in the next 6 months. (yes to 20, yes to 21)

3. *Preparation stage* individuals are those who are currently using, are planning to quit in the next 30 days and, finally, have made an attempt at abstinence in the past year. Individuals who are intending to quit but do not meet all of these criteria are considered contemplation. (yes to 20, yes to 21, yes to 22 and yes to 23)

4. *Action* subjects are those who are not currently using and have stopped using within the past 6 months. (No to 20 and less than 6 months on 24)

5. *Maintenance* subjects are those who are not currently using and have been clean for more than 6 months. (No to 20 and more than 6 months on 24)