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The effect of substance abuse on nonverbal emotional expressiveness

Amy Lee Gnade

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THE EFFECT OF SUBSTANCE ABUSE ON NONVERBAL EMOTIONAL EXPRESSIVENESS

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by
Amy Lee Gnade
June 2001
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A Project
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Approved by:

Dr. Janet Chang, Faculty Supervisor
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Dr. Rosemary McCaslin,
M.S.W. Research Coordinator
This study explored the effect of substance abuse on affective communication. Nonverbal emotional expressiveness of substance users and nonusers were measured through an affective communication scale and compared by the scores. The control group included 25 subjects without substance use problems, and the experimental group consisted of 25 substance users. The hypothesis was that substance abusers were less expressive in nonverbal emotions than nonusers. The t test showed that there was a significant difference between substance users and nonusers in nonverbal emotional expressiveness. The finding supported the hypothesis. When treating substance abusers, social workers may improve their mood or emotions by teaching them emotional expressiveness.
ACKNOWLEDGMENTS

The author would like to express thanks to Bilingual Family Counseling Services and the Executive Director Olivia Sevilla, without whom this project would not be possible. I would also like to thank my project advisor, Dr. Janet Chang, for her advice and insight. Finally, I would like to express deep appreciation to my husband, Joseph Gnade.
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CHAPTER ONE
INTRODUCTION

Problem Statement

Substance abuse and alcoholism cause major health and social problems throughout the world. Addiction is the number one health problem facing America (Hoff, 1963). There are several million addicts in this country (Hoff, 1963). Millions of Americans are also consistent abusers of alcohol and various other addictive substances.

Substance abusers and addicts have an impact on all of our lives in many ways. Thousands of addicts die each year as a direct result of their addictions. Each year drunk drivers kill thousands of innocent victims on our highways. Substance abuse and alcoholism destroy millions of families (Hoff, 1963).

Addiction and substance abuse cost industry and the American collective billions of dollars each year. Suicide and divorce, as well as homicide, rape, child abuse, and a diversity of other criminal behaviors, are associated with substance abuse and alcoholism. Indeed, for over two decades addictive substances have consistently resulted in the emotional and physical destruction of hundreds of thousands of Americans (Sobell & Sobell, 1978).
Two basic reactions occur when people abuse drugs and alcohol regularly: tolerance and dependence. These reactions are the essential characteristics of addictive behavior and are central to an understanding of it.

Tolerance means that, as people continue over a period of time to use a given amount of a psychoactive drug or alcohol, the substance comes to have less and less of an effect on them. As the central nervous system adapts to the drug, a user requires larger and larger doses to achieve the same effect (Jaffe, 1991).

Dependence means that a person either psychologically or physically indicates a need for a particular substance or activity so severe that intense physical or emotional disturbances result when that substance is withdrawn or the behaviors such as gambling is stopped (Johnson, 1991).

Addiction is an illness caused by the prolonged ingestion of ethyl alcohol and drugs (especially in biologically vulnerable people) and is manifested by a variety of harmful physical, mental, behavioral, and social effects. Alcohol and drug abuse, even by people who are not—or not yet—suffering from alcoholism, may also produce undesirable or dangerous effects. Alcoholism, alcohol abuse, and related problems, taken as a whole, must be of profound concern to the American people, mental
health professionals, and those responsible for public policy.

Communication is considered an important part of human behavior, especially in the practice of psychotherapy. Both clients' verbal and nonverbal behavior indicate their psychological status. Numerous studies investigate human expression such as facial expression, nonverbal cues for anxiety or depression and so on (Ekman, 1973; Ekman & Friesen, 1975; Waxer, 1974; Waxer, 1977; Waxer, 1981), but few studies have examined if substance use affect individual's expressiveness. The proposed study will explore the relationship between substance use and affective communication.

Problem Focus

Many factors influence the decision to drink alcohol or take drugs. These range from the availability of the product and the means to the more complex issues of family, social, and personality interactions. At present no single theory or model can adequately account for either the development or the maintenance of substance abuse.

Psychological factors may be grouped into the categories of cultural, environmental, interpersonal, and intrapersonal influences. Biological factors include genetic, biochemical, and physiological differences.
between people which affect the predisposition to take the substance (Clark & Saunders, 1988).

It is commonly estimated that some millions of Americans who abuse drugs or alcohol have significant alcohol or drug related problems affecting their work, family life, social adjustment, or health. Most either will not accept the need to stop drinking or fail to stop even though they try. Barriers to successful intervention include patients' resistance through denial and rationalization and their lack of motivation to question their own abusive behavior or to seek help during early stages of abuse. Effective and efficient prevention and early intervention strategies to deal with emotional problems are important. Emotional problems that are ignored may cause serious mental or physical illnesses.

There are many emotional responses to stressful situations. Stress disturbs one's equilibrium, and, in an attempt to regain balance, the mind and body mobilize to adapt (Wurmser, 1978). The adaptive emotions experienced as a result of stress serve to warn, defend, and/or relieve. Though these emotions are often unpleasant, they are vital to the restoration of a person's normal state. The emotions that are a result of stress are anxiety, depression and anger.
People who chronically inhibit their emotions may be more prone to disease than those who are emotionally expressive (Alexander, 1939; Freud, 1961). There have been empirical reports of an association between the inhibition of anger and hostility on the one hand and essential hypertension and coronary heart disease on the other (Engebretson, Matthews, Scheier, 1989). Other studies suggested that emotional inhibition may be linked to cancer onset and progression (Gross, 1989; Temoshock, 1987).

A researcher has suggested that the common personality and behavioral features encountered by their experiences and their repetitive behavior in coping with stress (Bandura, 1969). The substance that initially allows uninhibited self-expression and relieves apprehension and self-consciousness gradually assumes greater and greater importance, but it is ultimately useful only in dulling a sense of guilt and remorse, justifying failure, and rationalizing a long chain of complicated and protective beliefs.

An immediate, short-term effect of substance is mild tranquilization, or an euphoric sense of well being. Feeling of uneasiness, tension, and fear, as well as more severe symptoms of panic and depression, are reduced. Communication of emotions can be a vehicle to process and
release unease tension and fear. This study examined whether substance abuse inhibits affective communication thus tending to suppress their emotions. This study explored gender and ethnicity issues in terms of nonverbal emotional expressiveness. The study would help social workers to understand the relationship between affective communication and substance abuse.
Inherited addiction has been most studied in the case of alcoholism. Genetic theory indicates that inherited mechanisms cause or predispose people to be addicted. One study attempting to separate genetic from environmental factors, in which adopted-away offspring of alcoholics were compared to adopted children with nonalcoholic biological parents, claimed a three to four times greater alcoholism rate for those whose biological parents were alcoholic (Goodwin, Schulsinger, Hermansen, & Winokur, 1973).

Another study speculated that addicts may be characterized by an inbred endorphin deficiency that leaves them unusually sensitive to pain (Goldstein, 1976b & Snyder, 1977). Such people would then especially welcome, and might even require, the elevation of their pain threshold brought on by narcotics.

Alcohol abusers have high rates of coexisting psychopathologies which include those that interfere with social functioning (e.g., antisocial disorders) and disorders that cause severe depression or increase anxiety (e.g., negative-affect disorders) (Clerk & Bukstein, 1998). Understanding emotional state on the development
and course of substance abuse may enhance preventive and treatment interventions.

For many years it was fashionable to explain alcoholism by asserting that alcoholics suffered from personality disorders. However, experts come to agree that there is no such thing as a distinct alcoholic personality types may influence alcoholic behavior, they do not necessarily cause alcoholism.

Learning theory claims that drinking alcohol is a learned behavior that is governed by the normal principles of learning (Ward, 1980). Uncontrolled drinking is viewed as a destructive habit that is exhibited under negative conditions, such as during times of great stress. The behavior is reinforced by the positive consequences that immediately result from the alcohol - relief from anxiety and feelings of increased ability and power. Although drinking has both positive and negative effects, the negative ones usually occur after the positive ones and have less influence on the learning pattern.

This theory predicts that an acquired, or learned behavior can be unlearned, or at least modified. Therefore, alcoholics should be able to learn to control their alcohol intake and not need to stop drinking completely. This position does not take into account the possibility that the addiction to alcohol causes certain,
though unidentified, physiological mechanisms to come into play.

The holistic theory states that alcoholism is a way of life in which interactions with people, places, and events are influenced by the potential use and actual use of alcohol (Clark & Saunders, 1988). In some ways this theory is a more sophisticated version of the learning theory, which tends to claim that alcoholism is merely a bad habit. According to the holistic theory, the alcoholic's needs, perceptions, judgments, expectations, and anticipation of self and others are all colored by the consequences of drinking.

Therefore, it is not alcoholism alone that is a disease but also all the external and internal pressures - environmental, psychological, and biological - that bear on the alcoholic. This in part explains why abstinence alone does not help many alcoholics become productive individuals.

The holistic approach recognizes the importance of treating the psychological, sociological, nutritional, and physical consequences of excessive drinking (Clark & Saunders, 1988). Therefore, in addition to abstinence, treatment includes diet, exercise, the improvement of social skills, and the establishment of a total social support system.
Adaptation theory does not focus on the way in which the addict's experience of a drug's effect fits into the person's psychological and environmental ecology. Drugs are seen as a way to cope, however dysfunctionally, with personal and social needs and changing situational demands (Wurmser, 1978).

Coping can be defined with respect to both (1) stress-coping skills and (2) temptation-coping (Wurmser, 1978). The first is relevant for coping with general life stressors, and the second is relevant for coping with a situation where there is a specific temptation for substance use (Wurmser, 1978).

With respect to stress-coping skills, coping is defined as activities or behaviors a person uses in the attempt to maintain a balance between demands from the environment and resources currently available to meet those demands (Coyne & Lazarus, 1980). The goal of such coping is to maintain an appropriate balance of positive and negative affect. From this perspective, substance use is one coping response that people could use to manage their affect. Individuals who are not able or neglect to express their feelings and even suppress them may create some negative affect. In order to maintain an balance of their positive and negative feelings, they may use substance to manage their affect.
With respect to temptation-coping skills, coping is how individuals deal with demands created by various kinds of temptations such as social pressure to use substances, biological rooted impulses, or the pull of habit.

Studies suggest that substance use may indeed accomplish both functions: minimizing negative mood and maximizing positive mood. A considerable body of evidence indicates that cigarette smoking or alcohol uses, for example, serve a direct stress-reduction function (Abrams, 1983; Leventhal & Cleary, 1980). In addition, substance use may serve to increase positive affect through providing physically pleasurable sensations and achieving feelings of relaxation.

Positive Affect reflects the extent to which a person feels enthusiastic, active, and alert, where Negative Affect is a general dimension of subjective distress and unpleasurable engagement (Watson and Tellegen, 1985). High Positive Affect is a state of high energy, full concentration, and pleasurable engagement, whereas sadness and lethargy characterize low Positive Affect. In contrast, high Negative Affect subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, whereas low Negative Affect is a state of calmness and serenity.
Various research has shown these two affective state dimensions are related to corresponding affective trait dimensions of positive and negative emotionality (individual differences in positive and negative emotional reactivity). Positive Affect and Negative Affect roughly correspond to the dominant personality factors of extroversion and anxiety/neuroticism (Tellegen, 1985; Watson & Clark, 1984). The study also suggested that low Positive Affective and high Negative Affective (both state and trait) are major distinguishing features of depression and anxiety (Tellegen, 1985).

Emotional suppression is defined as the conscious inhibition of one's own emotional expressive behavior while emotionally aroused (Arnold, 1960). Some studies suggested that individuals differ as to whether they are emotionally expressive in which case they can be identified as having an extroverted personality (Eysenck & Eysenck, 1968a, 1968b). Other researchers found that substance abusers tend to be more introverted than nonusers (Tarnai & Young, 1983; Spotts & Shontz, 1984).

Moodiness, depression, and anxiety seem to go hand in hand with the use of substance. Researchers found that alcoholics, for example, are more emotional, tense, and worried than nonalcoholics (Mendelson & Mello, 1986). When specific emotions were measured, they were found to
be very depressed and anxious. Alcohol gradually becomes more important as a means of controlling negative emotions.

Alcoholics often experience difficulty in their interpersonal relationships especially with their own family, particularly in the areas of intimacy (Jacob, Ritchey, Cvitkovic, & Blane, 1981). Because of this, alcoholics are frequently frustrated in their personal lives and feel that other people do not understand them. One study found that alcohol exerts negative effects on couples' affective communication (Jacob et al, 1981). The other study indicated that alcoholics showed more verbal behavior while intoxicated than while sober. They were significantly more negative and less positive in nonverbal behaviors than were their spouses (Framenstein, Hay, & Nathan, 1985).

The ability to express emotions is considered to be an important aspect of psychological well-being. There are many studies concerning the ways in which people communicate verbally, but there are few studies concerning the ability of people's nonverbal emotional expressiveness. One study suggested that specific clusters or constellations of nonverbal cues exist for various emotional states (Waxer, 1974; 1977). For example, nonverbal signs of depression include poor eye contact,
head angled down and an absence of hand movement. Anxious individuals shifted their eyes quite frequently, breaking to the right most often.

Another aspect of nonverbal behavior is the expression of emotion in the face of man. This particular type of behavior has been studied for some time. It is generally showed that certain facial expressions of emotion are universal, but that they may be influenced by such things as culture and age (Darwin, 1872; Tomkins & McCarter, 1964; Ekman, Friesen & Tomkins, 1971).

Clinical observation of expressive behavior is considered important method for studying nonverbal behavior. One researcher used a content analysis of communication and illustrated his method by analyzing, in detail, therapy sessions with a schizophrenic patient, her mother, and two psychiatrists (Scheflen, 1963). Many therapists believe that by attending to the nonverbal expressions of patients (as well as to their verbal expressions) they can understand the patient's underlying problem better.

This study explored the effect of substance abuse on nonverbal emotional expressiveness. A 13-item self-report Affective Communication Test (ACT) was used to measure subjects' nonverbal emotional expressiveness. It was
hypothesized that substance abusers were less expressive than nonusers in nonverbal emotional expressiveness.
CHAPTER THREE
RESEARCH DESIGN AND METHOD

Study Design

The purpose of this study was to compare nonverbal emotional expressiveness between substance users and non-substance users. It was a survey design, which used self-administered questionnaire to measure subjects' nonverbal emotional expressiveness. The comparison groups included twenty-five subjects who did not have substance problems and twenty-five subjects were substance abusers. Each of the subjects in both groups participated in a self-description questionnaire, the Affective Communication Scale (Appendix A). Affective communication was the dependent variable and use of substance abuse was independent variable. Gender, ethnicity, education and age were contextual variables. The research question was: Did substance abuse inhibit affective communication?

Sampling

The total of 50 subjects was selected from various sources. Twenty-five out of 50 subjects were non-substance users who were participants of Parenting Class at Bilingual Family Counseling Services and workers from City of Los Angeles. The other 25 subjects were substance users who were patients of Bilingual Family Counseling Services,
AA meeting, patients in detoxification center. The majority of subjects in both groups was at the age of 25 to 46 and most had some high school or college education.

Data Collection and Instruments

The researcher collected data from a self-reported questionnaire. It took about 15 minutes to complete the questionnaire which contains affective communication questions, substance use history and demographic information.

The Affective Communication Scale (ACS), (Friedman, Prince, Riggio, & Dimatteo, 1980) was designed to measure subject's nonverbal emotional expressiveness. The Affective Communication Scale consisted of 13 items to measure individual differences. The ACS was on a 5-point scale from 1 to 5 the extent to which the statement is true or false as it applied to him or her. The reliability coefficient for a sample of 289 undergraduates was equal to .77 (Friedman et al, 1980). The test-retest reliability appears to be adequate. A sample of 44 students was administered the Affective Communication Scale on two occasions, two months apart. The test-retest correlation was .90 (p < .001) (Friedman et al, 1980). A second sample of 38 was measured with a separation of one week between test and retest. The correlation was .91 (p
The validity of the Affective Communication Scale was measured by asking 68 undergraduates' friends to rate subjects' expressiveness (Friedman, Prince, Riggio, & Dimatteo, 1980). It was known that friends' ratings were relatively free of biases introduced by subjects self-report measures. The subjects were given three of the following four forms: the degree to which he or she is (1) expressive with face, (2) expressive with body, (3) expressive with voice, and (4) would make a good actor. The friends' ratings were averaged for each subject. There was a significant relationship between the Affective Communication Scale Scores and the ratings of expressiveness subjects' friends, $r(59) = .39$, $p < .01$. Although the Affective Communication Scale was a short, self-report measure, it was valid in the sense that it reflected the perceptions of others concerning one's expressiveness.

**Procedures**

For non-substance users group, the researcher distributed each packet to the subjects which contained a consent form (Appendix B), a questionnaire and a debriefing statement (Appendix C). For substance users group, the counselors of Bilingual Family Services, AA
meetings and detoxification centers distributed the questionnaires to each subject. Participants of both groups were told that all answers were confidential, and only group data was used in the study. Subjects were asked to sign the consent forms, which described the study and the nature of their participation. After that the respondents were asked to answer the affective communication questionnaires as truthfully as possible. Subjects were told if they were not comfortable to answer the questions, they can stop anytime.

Protection of Human Subjects

To protect the human subjects, who were involved in this study, the researcher kept the data confidential. The researcher safeguarded the confidentiality of the collected data by limiting the number of individuals to two (my research advisor and myself) who reviewed the data. The data was kept locked at the researcher's home during the study. Once the questionnaires had been collected and the data had been entered into a computer file, the questionnaires were destroyed. Thereafter, raw data in the computer data file was identifiable only by case ID numbers. The researcher adhered to the code of ethics of the National Association of Social Workers (NASW).
Data Analysis

The study employed a quantitative approach using self-administered questionnaires. In order to assess difference in the level of nonverbal emotional expressiveness between substance user group and nonuser group, two groups were compared. Affective communication was the dependent variable and substance abuse, gender, ethnicity, education and age were independent variables. Univariate statistics such as frequency distribution, measures of central tendency and dispersion were used for descriptive analysis. Inferential statistics such as chi-square, t-test and simple analysis of variance were also employed to evaluate the relationship between independent and dependent variables.
Table 1 presents the demographic characteristics of the respondents. A total of 50 subjects participated in this study with 25 in each group (substance-user and nonuser). The age of respondents ranged from 20 to 49. Almost half of participants (48%) in the substance-user group were from the ages of 31 to 40, about one third (32%) of them were 20 to 30, and one fifth (20%) were 41 to 49. Forty percent of subjects in the nonuser group were from the ages of 41 to 49, about one third (32%) of them were 31 to 40, and slightly greater than one fourth (28%) were 20 to 30.

In terms of the level of education for the substance-user group, 40% of subjects had some high school education. Twenty percent were high school graduates, 20% had some college education, 12% were college graduates, 4% had post graduate education, and 4% graduated from elementary school. For the nonuser group, 32% of participants had some college education, 28% graduated from high school, 20% graduated from college, 16% had some high school education, and 4% had post-graduate education.

Forty-four percent of respondents in substance-user group were Hispanic or Latino, 40% were Non-Hispanic White or Caucasian, 8% were African American, 4% were Native
American, and 4% were in the Other category. In the nonuser group, 64% reported Non-Hispanic White or Caucasian, 24% were Hispanic or Latino, 8% were African American, and 4% were Asian American. Fifty-two percent of subjects in the substance-user group were female, and 48% were male. Sixty-four percent of respondents in the nonuser group were female, and 30% were male. (See Appendix D for relevant information.)

Table 2 shows the frequency distribution of the affective communication scale in sample population. In terms of dancing when hearing good dance music for the substance-user group, most subjects reported that they kept still when hearing good dance music. For the nonuser group, most respondents could not keep still when hearing good dance music. There was a statistically significant association between substance use and dancing when hearing good dance music. In terms of expressing emotion over the telephone, a majority of substance users was not expressive and most nonusers were expressive. There was an association between substance use and expressiveness. (See Appendix E for relevant data.)

The t test was calculated to assess affective communication between the two groups. There was a significant difference between the substance-user group and the nonuser group in nonverbal emotional
expressiveness ($t=3.368$, df=48; $p=.002$). Substance nonusers were more expressive emotionally than substance users.
Twenty-nine females and twenty-one males participated in this study. The majority of respondents were between 30 and 43 years old with either high school or some college education. About half of them were Non-Hispanic White and approximately one third were Hispanic or Latino.

The age, education and ethnicity of the two groups were slightly different. Respondents in the nonuser group were a little bit older and had more education than the substance-user group. In terms of ethnicity, the nonuser group consisted of more White/Caucasian and less Hispanic/Latino subjects than the substance-user group. Comparing the gender of both groups, the nonuser group had more female respondents than the substance-user group.

The t test supported the hypothesis that substance abusers were significantly less expressive emotionally than nonusers. Substance users may use substances to cope with their incompetence in expressiveness. Because of the incapability to express his or her emotion, the negative affect accumulates inside of an individual, which may create the imbalance affect of the person. Adaptation theory indicated that coping is used to appropriate the balance of positive and negative affect (Coyne & Lazarus, 1980). Substance use is one coping response when people
have difficulty to express themselves emotionally. Individuals who are not able or neglect to express or even suppress their feelings may create some negative affect. They may use substances to manage their feelings. Studies also showed that substances may indeed minimize negative mood and maximize positive mood (Abrams, 1983; Leventhal & Cleary, 1980).

Some studies suggested that substance abusers tend to be more introverted than nonusers (Tarnai & Young, 1983; Spotts & Shontz, 1984), and introverted personality was characterized as emotionally unexpressive (Eysenck & Eysenck, 1968a & 1968b). These findings also supported the hypothesis of this study that substance users were less expressive emotionally than nonusers. This finding has great implications for social work practice. When social workers have substance abusers as clients, clients' emotional expressiveness may need to be assessed. Teaching clients to express their emotion may improve their mood and vent their emotions.

In general terms, the goals of the education of clients' emotions are to provide a suitable environment for the unfolding of the affective aspects of the person. It involves the direction of impulse and feeling towards objects that deeply satisfy, sometimes by way of eliciting new impulses and feelings, sometimes by channeling and
redirecting them where they have fastened on less ultimately satisfying or inadequate objects. It also involves taking steps to prevent occasions of emotional outburst. Overall the education of emotions is the endeavor to help clients to take ultimate responsibility for themselves, not allowing themselves to become completely passive victims of feeling, but actively managing their own inner lives as befits responsible persons.

The following are suggested techniques that social workers can use to educate clients about their emotions: (1) teaching clients specific emotional vocabulary, (2) encouraging clients to use these vocabularies through talking about feelings, journalizing, poetry, and art activities such as dancing, singing or painting, (3) changing clients' cognition about emotions and encouraging clients to experience feelings, and (4) teaching clients how to manage their feelings.

This study had some limitations. The subjects of this study were not randomly selected. The sample size was small, and the two groups were not comparable, therefore, the generalization of the results is limited. The finding of the study should be accepted with caution. Further study is needed with a larger sample size.
APPENDIX A

QUESTIONNAIRE

Demographics

DIRECTIONS: Please CIRCLE the appropriate answer or FILL IN the appropriate spaces as carefully and accurately as you can.

1. What is your age? ____________

2. What is your gender?
   (1) female (2) male

3. What is your education level?
   (1) elementary school
   (2) some high school completed
   (3) high school completed
   (4) some college
   (5) college graduate
   (6) post graduate work
   (7) other (specify) ______________

4. What is your ethnicity?
   (1) Native American or Alaskan Native
   (2) African American
   (3) Asian American or Pacific Islander
   (4) Hispanic or Latino
   (5) Non-Hispanic White/Caucasian
   (6) Other (specify) ____________
APPENDIX A

QUESTIONNAIRE

Substance Use History

The following questions are designed to understand your substance use history. Please CIRCLE or FILL IN the appropriate answers as accurately as you can.

5. Do you use any substance regularly including alcohol?
   (1) Yes (2) No

6. What was your age when you first started using any substance including alcohol?
   At age: ____________

7. What was the last date you used any substance including alcohol?
   Last date of use: ______________

8. How often do you use any kind of substance?
   (1) daily
   (2) occasional
   (3) binges
   (4) ___ times per week
   (5) ___ times per month

9. What is the amount of substance including alcohol you take per day/week/etc.?

10. Do you have any symptoms of substance use?
    (1) Yes (2) No
    If yes, Please list the symptoms:

11. Do you have any withdrawal symptoms of substance use?
    (1) Yes (2) No
    If yes, please list the withdrawal symptoms:
APPENDIX A

QUESTIONNAIRE

The Affective Communication Scale

The following questions are designed to understand your nonverbal emotional expressiveness. It is not a test, so there are no right or wrong answers. Please circle the number that describes you accurately for each question.

1= Not at all true of me
2= Barely true of me
3= Somewhat true of me
4= Mostly true of me
5= Completely true of me

1. When I hear good dance music, I can hardly keep still.
   1 ______ 2 ______ 3 ______ 4 ______ 5

2. My laugh is soft and subdued.
   1 ______ 2 ______ 3 ______ 4 ______ 5

3. I can easily express emotion over the telephone.
   1 ______ 2 ______ 3 ______ 4 ______ 5

4. I often touch friends during conversations.
   1 ______ 2 ______ 3 ______ 4 ______ 5

5. I dislike being watched by a large group of people.
   1 ______ 2 ______ 3 ______ 4 ______ 5

6. I usually have a neutral facial expression.
   1 ______ 2 ______ 3 ______ 4 ______ 5
7. People tell me that I would make a good actor or actress.

8. I like to remain unnoticed in a crowd.

9. I am shy among strangers.

10. I am able to give a seductive glance if I want to.

11. I am terrible at pantomime as in games like charades.

12. At small parties I am the center of attention.

13. I show that I like someone by hugging or touching that person.
APPENDIX B

INFORMED CONSENT FORM
Study of Affective Communication

The study in which you are about to participate is designed to investigate the relationship between substance abuse and affective communication. This study is conducted by Amy Gnade under the supervision of Dr. Janet Chang, Professor of Social Work. This study has been approved by the Department of Social Work Sub-committee of the Institutional Review Board at California State University, San Bernardino. The university requires that you give your consent before participating in this study.

In this study you will be asked to respond to some questions about affective communication. The task should take about 15 minutes to complete. All of your responses will be held in the strictest of confidence by the researchers. Your name will not be reported with your responses. All data will be reported in group form only. You may receive the group results of this study upon completion in the Spring Quarter of 2001.

Your participation in this study is totally voluntary. You are free to withdraw at any time during this study without penalty. When you complete the task, you will receive a debriefing statement describing the study in more detail.

If you have any questions about the study, please feel free to contact Professor Janet Chang at (909) 880-5184.

By placing a check mark in the box below, I acknowledge that I have been informed of, and that I understand the nature and purpose of this study, and I freely consent to participate. I also acknowledge that I am at least 18 years of age.

Place a check mark here

Today's date:
APPENDIX C

DEBRIEFING STATEMENT
Thank you for participating in this study. As indicated in the informed consent form, the purpose of the study is to evaluate the relationship between substance abuse and affective communication. It is hoped that the results of this study will help us gain an increased understanding of the relationship between these variables.

If in responding to this questionnaire any distressing issues were evoked, it might be helpful to know that there are some counseling resources that can help you deal with those distressing issues. The phone numbers are Alcoholics Anonymous (909) 825-4700 and Help Line (800) 300-8040. If you have any questions about the study, please feel free to contact Professor Janet Chang at (909) 880-5184. A copy of the group results of this study will be available in the library or Social Work Department of CSUSB, 5500 University Parkway, San Bernardino, CA 92407 at the end of Spring Quarter 2001.
APPENDIX D

TABLE 1. DEMOGRAPHIC INFORMATION
## APPENDIX D

### TABLE 1. DEMOGRAPHIC INFORMATION

<table>
<thead>
<tr>
<th>Variable</th>
<th>N (frequency)</th>
<th>% (percentage)</th>
<th>N (frequency)</th>
<th>% (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
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APPENDIX E

TABLE 2. AFFECTIVE COMMUNICATION SCALE
## TABLE 2. AFFECTIVE COMMUNICATION SCALE

<table>
<thead>
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<th>Variable</th>
<th>Substance-users</th>
<th>Nonusers</th>
<th>Chi-square</th>
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<td><strong>When I hear good dance music, I can hardly keep still.</strong></td>
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<tr>
<td>Not at all true of me</td>
<td>4 16</td>
<td>1 4</td>
<td></td>
</tr>
<tr>
<td>Barely true of me</td>
<td>6 24</td>
<td>1 4</td>
<td></td>
</tr>
<tr>
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<td>9 36</td>
<td>5 20</td>
<td></td>
</tr>
<tr>
<td>Mostly true of me</td>
<td>3 12</td>
<td>9 36</td>
<td></td>
</tr>
<tr>
<td>Completely true of me</td>
<td>3 12</td>
<td>9 36</td>
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<tr>
<td><strong>My laugh is soft and subdued.</strong></td>
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<td>3 12</td>
<td>5 32</td>
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</tr>
<tr>
<td>Completely true of me</td>
<td>3 12</td>
<td>2 8</td>
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</tr>
<tr>
<td><strong>I can easily express emotion</strong></td>
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<tr>
<td>Over the telephone.</td>
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<td>5 20</td>
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<td>Somewhat true of me</td>
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<tr>
<td>Mostly true of me</td>
<td>8 32</td>
<td>10 40</td>
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</tr>
<tr>
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<td>3 12</td>
<td>10 40</td>
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<td><strong>I often touch friends during</strong></td>
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<td>Conversations.</td>
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<td>Barely true of me</td>
<td>7 28</td>
<td>1 4</td>
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<td>Somewhat true of me</td>
<td>8 32</td>
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<td>Mostly true of me</td>
<td>4 16</td>
<td>6 24</td>
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</tr>
<tr>
<td>Completely true of me</td>
<td>2 8</td>
<td>6 24</td>
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</tr>
<tr>
<td><strong>I dislike being watched by</strong></td>
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<td></td>
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<tr>
<td>a large group of people.</td>
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<td>I usually have a neutral facial expression.</td>
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<tr>
<td>People tell me that I would make a good actor or actress.</td>
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<td>3</td>
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*p < .05
REFERENCES


Johnson, B. A. (1991). Cannabis. In I. B. Glass (Eds.), *The international handbook of addiction behavior* (64-


