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IDENTITY STYLE, SUBSTANCE USE, AND
PERCEIVED FAMILY FUNCTIONING
AMONG YOUNG ADULTS:
AN EXPLORATORY STUDY

By

Larry F. Forthun

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Family and Human Development

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1995

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ABSTRACT

Identity Style, Substance Use, and Perceived
Family Functioning Among Young Adults:
An Exploratory Study

by

Larry F. Forthun, Master of Science

Utah State University, 1995

Major Professor: Scot M. Allgood
Department: Family and Human Development

One hundred eight individuals between the ages of 17 and 25 completed measures assessing identity style, family functioning, and substance use. Fifty-seven respondents were evaluated as they were applying for services at a local substance abuse treatment center. Fifty-one respondents were surveyed from a local university general education class.

The identity style construct is a self-report measure that evaluates the problem-solving and decision-making strategies of respondents. These constructs echo Marcia's identity statuses with the Normative and Diffuse/Avoidant Subscales being utilized in this study. Family functioning was also assessed by self-report and evaluated overall family functioning. A factor analysis of the substance use measure resulted in two factors that were defined as Gateway Drugs (alcohol, tobacco, and marijuana) and Illicit Substances (cocaine,

hallucinogens, etc.) and were assessed as either use or nonuse during the last 4 weeks.

Findings support the identity developmental paradigm of problem behavior and suggest that Normative-oriented respondents reported less use of Gateway Drugs and more functional family attributes. Conversely, the Diffuse/Avoidant-oriented respondents reported more use of substances and less functional family attributes.

Difficulties in measurement are presented as well as suggestions for family-based intervention strategies designed to reduce young adult substance use and abuse.

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My most special thanks goes to my wife, Tracy. She has shown great patience as I have struggled to complete this project. My long hours in front of the computer were met with compassion and encouragement. And I thank my daughter, Laykin, whose smile would remind me of the important things in life. I love you both!

Larry F. Forthun

CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGMENTS	iv
LIST OF TABLES	vii
CHAPTER	
I. INTRODUCTION	1
Consequences of Adolescent Substance Use	2
Purpose of Study	4
II. LITERATURE REVIEW	7
Theoretical Overview	7
Identity Status and Substance Use	10
Family Functioning and Substance Use	12
Identity Status and Family Functioning	15
Summary	18
III. METHODS	20
Sample	20
Treatment Sample	20
University Sample	21
Hypotheses	21
Design	23
Measurement	24
Identity Style Inventory	24
Identity Style Inventory: Codependent Relationship Inventory Revision	25
Family Assessment Device	26
Poly-Drug Use History Questionnaire	29
Procedures	30
IV. RESULTS	32
Reliability and Validity	32

Identity Style Inventory:	
University Sample	32
Identity Style Inventory (CORI):	
Treatment Sample	33
Family Assessment Device	34
Poly-Drug Use History Questionnaire	36
Scoring Procedures	38
Identity Style Inventory	38
Family Assessment Device	39
Poly-Drug Use History Questionnaire	39
Hypotheses Testing	40
Between-Sample Analyses	40
Combined Sample Analyses	43
V. SUMMARY AND DISCUSSION	48
Methodological Summary	48
Summary of Findings	51
Between-Sample Findings	51
Combined Sample Findings	53
Conclusions	56
Limitations and Recommendations	57
Threats to Validity	57
Limitations in Measurement	58
Implications for Intervention	59
Conclusion	61
REFERENCES	63
APPENDICES	68
Appendix A: Identity Style Inventory	69
Appendix B: Family Assessment Device	76
Appendix C: Poly-Drug Use History Questionnaire	82
Appendix D: Acceptance Letter from USU Institutional Review Board	85

LIST OF TABLES

Table	Page
1. Demographic Information for the University and Treatment Samples	22
2. Family Assessment Device (FAD) Interscale Correlations and Reliabilities	35
3. Factor Loadings for a Secondary Principal Components Factor Analysis on the Family Assessment Device	36
4. Pattern Matrix Factor Loadings for a Principle Components Factor Analysis Following Oblique Rotation on the Poly-Drug Use History Questionnaire	37
5. Frequencies of Gateway Drug Use by Sample	42
6. Frequencies of Respondents Classified for Identity Style by Sample	43
7. Frequencies of Gateway Drug Use by Identity Style	44

CHAPTER I

INTRODUCTION

Current trends in adolescent and young adult substance use and abuse have fueled national concern. The National Institute of Drug Abuse [NIDA] (1990) has reported lifetime use of alcohol among adolescents 12 to 17 years of age exceeding 48% with reported lifetime use of illicit drugs (including marijuana, cocaine, and speed) exceeding 22%. Among those 18 to 25, lifetime alcohol use is reported at 88%, with illicit drug use reported at 55% (NIDA, 1990). These estimates are conservative, with some studies finding alcohol use among senior high-school students as high as 90% (Jones & Hartmann, 1988). Surprisingly, after several decades of prevention and intervention efforts by schools, media, and the community, reported age of first use of alcohol and other substances remains low. The mean age of first cigarette use is 11.5 years, for alcohol, 12.8 years, and for marijuana, 13.4 years (NIDA, 1990).

Substance use and abuse usually do not occur in isolation. Jessor and Jessor (1977) hypothesized that behaviors such as drinking, drug use, delinquent behavior, and sexual involvement constitute a syndrome of problem behavior among adolescents and young adults. These behaviors are negatively related to conventional behaviors such as church attendance and academic performance, and positively associated with unconventional personality and social-environmental variables (Donovan & Jessor, 1985). Unconventional behaviors that are highly correlated with substance use and abuse include: lower value on education, higher value on independence, lower religiosity, greater tolerance for delinquency,

and more positive motivations for drinking, drug use, and sex (Jessor & Jessor, 1977).

It follows that the experimental use of alcohol and illicit substances that usually begins in adolescence may lead to a lifestyle of problem behavior that can hinder the resolution of adolescent and young adult developmental tasks (Botvin & Dusenbury, 1989; Newcomb & Bentler, 1988a; Jessor & Jessor, 1977). These tasks have been found to be mediated by personal and family factors, which combine to encourage normal psychosocial development. One task includes the formation of a mature identity, that critical stage during adolescence and young adulthood where past and present experiences are integrated into an intact personality that has continuity. According to Erikson (1968), identity is "the accrued confidence that one's ability to maintain inner sameness and continuity...is matched by the sameness and continuity of one's meaning for others" (p. 89). A necessary part of identity integration includes meaningful exploration of various attitudes, behaviors, and beliefs. This process may involve drug use. However, regular use or abuse of substances including alcohol has been correlated with behaviors that have a negative influence on adolescent and young adult development.

Consequences of Adolescent Substance Use

The consequences of regular alcohol and substance use by adolescents have been associated with significant physical, developmental, and social impairments (see Jessor & Jessor, 1977;

Newcomb & Bentler, 1988a, 1988b). Bentler and Newcomb (1988a) found that regular use of licit and illicit substances interferes in the proper resolution of adolescent and young adult developmental tasks.

They concluded:

Teenage drug use interferes with family development (by increasing divorce), job stability (by increasing the number of times fired), educational pursuits (by reducing the chances of high school graduation and likelihood of continuing to college), cognitive functioning (by increasing psychoticism and reducing deliberateness), survival attitudes (by increasing suicide ideation), and social functioning (by hard drugs increasing loneliness and reducing social support). (Bentler & Newcomb, 1988a, p. 227)

Resolution of the developmental tasks of adolescence and young adulthood may provide the maturity necessary to achieve success in adulthood.

However, substance use and abuse can seriously hinder this process.

Brook, Brook, Gordon, Whiteman, and Cohen (1990) further postulated a family/relational-based approach in explaining adolescent substance use and abuse. The family interactional theory echoes Jessor and Jessor's (1977) notions in that there is an association between developmental, personality, family and peer factors which combine to encourage adolescent conventionality and/or unconventionality. As with Jessor and Jessor (1977), conventionality (achievement motivation and behavior) acts as a buffer, or protective factor, in reducing risks for alcohol or substance use while unconventionality (drug prone personality traits) "contributes to drug use despite benign family and peer conditions" (p. 151). This model emphasizes parent-adolescent attachment, "parental personality characteristics involving intolerance of deviance, responsibility, self-control, and intrapsychic harmony,"

and adolescents who are "responsible, nonrebellious, achievement-oriented, and able to delay immediate . . . gratification" (Brook et al., 1990, p. 243).

Purpose of This Study

Although investigations into the psychosocial etiology of alcohol and substance use among adolescents and young adults have focused on personal, family, peer, and environmental stressors, they fail to incorporate Erikson's (1963, 1968) notions concerning psychosocial development, particularly the fifth stage: identity versus role confusion (Jones & Hartmann, 1988). According to Erikson (1959), adolescence and young adulthood is that developmental period where previous identifications are integrated into a whole that "has a different quality than the sum of its parts" (p. 90). The wholeness of the self is formed by the relationship of the self to others (family, peers, etc.) and the meanings that these relationships have on the emerging identity. Adolescents, then, are

preoccupied with what they appear to be in the eyes of others as compared with what they feel they are, and with the question of how to connect the roles and skills cultivated earlier with the ideal prototypes of the day. (Erikson, 1968, p. 128)

This dilemma may lead to identity confusion in which the individual is bewildered by his/her inability to integrate "past identifications, present competencies, and future aspirations" into a clear sense of self (Jones & Hartmann, 1988, p. 349). This lack of integration may lead to low self-esteem, ineffective coping strategies, and delinquent behaviors

including substance use or abuse (Erikson, 1968; Berzonsky, 1992; Jones & Hartmann, 1988).

Similarly, the social considerations of Erikson's psychosocial theory include the family. The first exposure that most individuals have to alcohol or illicit substances is usually in the context of the family (Steinglass, Bennett, Wolin, & Reiss, 1987). From childhood, exposure to alcohol and illicit drugs may be observed within the family either directly by viewing parent or sibling substance use behavior, or vicariously through the media. In either instance, attitudes concerning substance use and abuse are defined early and are influenced by the family. Nevertheless, current investigations linking ego identity developmental issues and substance use and abuse have failed to examine perceptions of the family. Evidence has accumulated that family processes are associated with identity formation. Levels of communication, problem-solving strategies, role taking, affective development, and issues surrounding control and independence within the family have all been shown to influence ego identity development among adolescents (Adams & Jones, 1983; Campbell, Adams, & Dobson, 1984; Grotevant & Cooper, 1985, 1986; Willemsen & Waterman, 1991). Likewise, many of these same variables have been associated with adolescent substance abuse (Baumrind, 1991; Jurich, Polson, Jurich, & Bates, 1985).

This study seeks to expand the identity paradigm of substance use and abuse among adolescents and young adults by including perceptions of family functioning. The identity status paradigm, operationalized by Marcia (1966) and expanded by Berzonsky (1988), postulates that the

integration of identity relevant information is mediated by three cognitive processing styles (e.g., Information, Normative, and Diffuse/Avoidant styles). These identity styles have been linked to levels of substance use with Diffuse/Avoidant being the least adaptive style (Jones & Hartmann, 1988; Jones, Ross, & Hartmann, 1992). Emerging evidence that family functioning has an influence on ego identity development and substance use favors an investigation of the effects of family relations on the preferred identity style of young adults as well as influence on the severity of substance use. It is hypothesized that family functioning along the dimensions of problem solving, communication, role taking, affective responsiveness and involvement, and behavior control are differentially related to severity of substance use and mediated by personal identity style.

CHAPTER II
REVIEW OF LITERATURE

The literature review that follows is divided into four sections. First, a theoretical overview of the identity status paradigm will provide the rationale for this proposal of study. This rationale will guide the development of the remaining sections, which will demonstrate the utility of the identity status paradigm of substance use and the inclusion of family functioning variables as relevant factors. Once the theoretical links have been identified, relevant research will be summarized that support these links. The research will demonstrate that identity status is related to substance use, family functioning is related to substance use, and identity status is related to family functioning. Following this review a summary will be provided that will conclude with the research question guiding this study.

Theoretical Overview

The conceptualization of ego identity for this study is based on Marcia's (1966) operationalization of ego identity into four statuses (achievement, moratorium, foreclosure, and diffusion) along a continuum of maturity marked by crisis (exploration) and commitment. Crisis refers to the exploration of meaningful alternatives, while commitment refers to the degree of personal investment the adolescent exhibits. "Identity Achievement" applies to individuals who have established commitments after actively exploring their options; "foreclosure" applies to individuals who have adopted commitments without exploration;

"moratorium" applies to individuals who are in the process of exploring, but have yet to solidify their commitments; and "diffusion" applies to individuals who have not committed and see no reason for exploration (Marcia, 1966).

Berzonsky (1988) expanded this model by combining Marcia's (1966) conceptualization of ego identity and Epstein's (1973) notion of self-concept. According to Epstein (1973), "the self-concept is a self-theory" and consists of hierarchically organized and internally consistent propositions about the nature of the world, the self, and their interaction (p. 407). Epstein (1973) proposed that our self-concept incorporates all of the necessary components of a psychological (or scientific) theory: It is extensive, parsimonious, empirically valid, internally consistent, testable, and useful. These elements are congruent with Marcia's operationalization of ego identity. For example, an achieved identity status represents commitment following a period of crisis. This suggests that the individual was active in exploring his/her own environment and committed only after exploring various options. Similarly, "an extensive self-theory will have concepts available for coping with a wide variety of situations . . . [and] should be more flexible and open to new experience" (Epstein, 1973, p. 408). On the other hand, a narrow self-theory would produce a simplified world view in which the person would see things more in black and white and use more rigid coping strategies (i.e., foreclosure). Comparable relationships can be established between Epstein's self-theory and the remaining identity statuses. In essence, the self-theory

perspective compliments the ego identity paradigm and enhances its utility by exploring adolescent and young adult decision-making processes.

Berzonsky (1988) hypothesized that identity styles could be conceptualized based on self-theory postulates. According to Berzonsky (1993a), there are differential means that individuals in the identity statuses likely use in "solving problems" and "making decisions" when confronted with identity relevant stimuli. By adulthood, each individual could probably utilize various strategies when confronted with problems and decisions; however, certain strategies tend to be preferred by certain individuals (Berzonsky, 1992). These strategies include: Information oriented self-theorists, Normative oriented self-theorists, and Diffuse/Avoidant self-theorists.

Information-oriented self-theorists "deal with personal decisions and identity concerns by deliberately seeking out, processing, and evaluating self-relevant information" (Berzonsky, 1993a, p. 173). These individuals would likely meet the criteria for the achieved and moratorium identity status under Marcia's (1966) classifications and are actively exploring identity-relevant issues. Information-oriented respondents use active, problem-focused coping strategies, and are open and willing to consider alternative values (Berzonsky, 1992, 1993b; Berzonsky & Sullivan, 1992).

Normative-oriented self-theorists preserve self-conceptions by "conforming to the prescriptions and expectations of significant others" (Berzonsky, 1992, p. 772). These individuals would likely meet the

criteria for the foreclosed identity status; they embrace beliefs imposed upon them by others. Normative-oriented individuals are believed to endorse authoritarianism, have rigid self-construct systems, and remain less open to consider information that may threaten hard core areas of the self (Berzonsky & Neimeyer, 1988; Berzonsky & Sullivan, 1992).

In contrast, Diffuse/Avoidant-oriented self-theorists have a ". . . poorly organized, self-theory [which] leads them to procrastinate and avoid dealing with personal conflicts and decisions" (Berzonsky, 1993a, p. 174). These individuals would be expected to attain a diffused identity status in that they accommodate to situations as they arise. Diffuse/Avoidant individuals have fragmented self-constructs, and use other directed coping-strategies (distancing, wishful thinking, and tension reduction tactics) (Berzonsky, Rice, & Neimeyer, 1990; Berzonsky, 1992). Since a Diffuse/Avoidant identity style is characterized by a lack of ideological or vocational aspiration, a tendency to be governed by immediate environmental consequences would not be uncommon (Marcia, 1966; Berzonsky, 1988). Diffuse/Avoidant youths likely delay decision making until environmental stresses or legal sanctions are applied to compel a change in behavior.

Identity Status and Substance Use

This model has found strong support in the literature in its association with reported uses and motivations for substance use. Jones and Hartmann (1988) reported that diffused respondents among a sample of

high-school students reported greater frequencies of substance use, regardless of type, when compared with their cohorts who were classified as achieved, moratorium, or foreclosed. Likewise, diffuse youths report fear of arrest as a motivation for nonuse of substances more often than their cohorts who were in the other identity statuses (Christopherson, Jones, & Sales, 1988). This supports the notion that Diffuse/Avoidant-oriented self-theorists tend to value immediate gratification and may, therefore, use substances for alleviating the anxiety of unresolved identity issues (Jones & Hartmann, 1988).

Foreclosed youths, on the other hand, report the lowest rate of use of substances in comparison to their cohorts who occupy the other identity statuses (Jones & Hartmann, 1988). Similarly, foreclosed adolescents cited religion most often as a motivation for nonuse of chemicals (Christopherson et al., 1988). Again, this is theoretically related to the notion that -oriented self-theorists reject stimuli that do not fit core beliefs about themselves (assuming anti-drug education is contributed by the family and other social institutions).

Achieved and moratorium respondents reported drug and alcohol use between these two extremes, perhaps as a function of the curiosity and exploration inherent in these identity classifications (Jones & Hartmann, 1988; Christopherson et al., 1988). The exploratory nature of the Information-oriented self-theorist may stimulate experimentation with alcohol and other drugs as an attempt to investigate the usefulness of these substances in the social and recreational endeavors that are present in their environment.

Similar findings were found in an investigation between identity "style" and alcohol and work-related problems. Using the Identity Style Inventory (ISI, Berzonsky, 1989), which assesses the preferred decision-making and problem-solving strategies defined in Berzonsky's (1988) social-cognitive model, Jones et al. (1992) correlated identity style with alcohol and work-related problems among a sample of military personnel. Consistent with the identity style paradigm, the Diffuse/Avoidant style correlated positively with both alcohol and work-related problems. Conversely, Information- and -Oriented styles correlated negatively with alcohol and work-related problems. These data further highlight the utility of identity styles in relation to adolescent and young adult substance use.

Family Functioning and Substance Use

The influence of family on the socialization and development of the individual from infancy is well documented; yet, these relationships change over time and once the child has reached adolescence, change may be dramatic. Erikson (1968) defined the changes in adolescence by emphasizing the transference of attachments from parents to peers. This transference yields an emotional separation from the family of origin and is replaced with a secure sense of one's own self. However, as Baumrind (1991) pointed out, "adolescents, in order to become self-regulated, individuated, competent individuals, require both the freedom to explore and experiment, and protection from experiences that are clearly dangerous" (p. 60). This security is provided by the family of

origin and therefore remains an important social context for adolescents and young adults.

Recent investigations have established a link between parent and family influences and adolescent substance use. Baumrind (1991), in a longitudinal investigation, found that parenting styles of parents of adolescents who became substance users and abusers differed significantly from parents of those who remained abstinent or became recreational users of alcohol. Those who reported heavy use and those who reported dependence on substances were found to have parents who were unconventional, undemanding, and unsupportive. Fathers of heavy adolescent users were less demanding and confrontive, were frequently absent from the home, and abused alcohol during the adolescent's childhood. Mothers displayed more internalization and externalized problem behaviors during the heavy user's childhood. Although no differences in competence were discovered between heavy users and nonusers during childhood, by adolescence heavy users were lacking in cognitive motivation and Achievement-Oriented and were less competent (Baumrind, 1991). Furthermore, mothers of female dependent users tended to be unsupportive, less assertive, and lacked personal agency, whereas fathers were more intrusive and exhibited signs of mental illness.

In contrast, abstinent or nonusing adolescents had parents whose parenting styles were marked by conforming, directive, and conventional parenting behaviors. The nonuser group was differentiated between "risk-avoidant" nonusers and "rational" nonusers based on motivations for abstinence (Baumrind, 1991). Risk-avoidant nonusers reported

motivations for abstinence that included fear of consequences (e.g., parental discipline) while rational nonusers reported motivations justified on specific and realistic bases (physiological danger). These motivations echo Christopherson et al.'s (1988) investigation and results suggest that rational nonusers tend to come from intact families that displayed more demanding and responsive parenting behaviors than risk-avoidant adolescent parenting behaviors. Perhaps for the rational nonusers, parental prescriptions against substance use served to encourage abstinence. Furthermore, rational nonusers were more socially and cognitively competent and exhibited less problem behavior than risk-avoidant nonusers as children. Consequently, recreational users tended to have parents who were less conforming yet more individuated (encouraging of independence). This group reported similar competence levels with the nonusing group and differed from the heavy and dependent users in a similar fashion. In all, 27% of the variance in substance use was explained by parenting style in this study (Baumrind, 1991).

Other investigations have reported similar results. Brook et al. (1990) reported that fathers of marijuana users tend to be less conventional, less religious, and more likely to model drug use (through alcohol and prescribed drugs) than fathers of nonusers. Furthermore, maternal aspects of marijuana users included mothers who were more rebellious, more tolerant of tobacco use, and use of beer or wine. Newcomb and Bentler (1988b) found that the use of cannabis increased family problems and decreased social support for adolescents. Paternal absence, less parental affection, and more parental permissiveness have

also been found to be associated with adolescent chemical use (Brook, Whiteman, & Gordon, 1985). Family functioning and parenting styles are, evidently, related to adolescent substance use and abuse and have been demonstrated to be quite influential in the examination of substance using behaviors by adolescents and young adults.

Identity Status and Family Functioning

The study of ego identity in relation to family functioning has received strong support. It appears that several family functioning variables do mediate identity development among adolescents. The most comprehensive model stating the role of the family in relation to ego identity development among adolescents has been advanced by Grotevant and Cooper (1986). These researchers, similar to Baumrind (1991), contend that the family has significant influence on adolescent identity development by allowing the adolescent to express differences while maintaining connectedness to the family. "Individuality" (through the expression of differences) is defined by two constructs: self-assertion and separateness. Self-assertion involves the ability to communicate clearly one's requests and desires, and separateness refers to the ability to express differences in ideas and experiences. "Connectedness" (emotional attachment to the family) is defined by mutuality and permeability. Mutuality involves sensitivity and respect for others ideas, feeling, and beliefs, while permeability refers to responsiveness to others' needs and an openness to their ideas and feelings.

Grotevant and Cooper (1985) tested the individuation model by assessing communication behaviors of adolescents and their parents involved in an interaction task coupled with an assessment of adolescent ego identity using the Ego Identity Interview (Marcia, 1966). The task involved planning a hypothetical vacation when unlimited funds were available. Results generally supported the model. Adolescents who scored high on exploration on the Ego Identity Interview "had fathers who expressed mutuality as well as separateness (through disagreements), had mothers who were low in permeability, and themselves demonstrated both separateness and permeability" (Grotevant & Cooper, 1986, p. 92). These results suggest that family communication can influence adolescent engagement and exploration into meaningful alternatives.

Congruent with the notion of individuation in family relationships is the need for families to maintain boundaries. Proper age-appropriate boundary maintenance within the family encourages separateness and connectedness by allowing differentiation of the individual within the family system. Families whose boundaries have become clouded sacrifice the emotional connectedness necessary to instill affectional bonds within the family (Minuchin, 1974). Likewise, families whose boundaries have become rigid or enmeshed sacrifice the autonomy necessary to separate from the family in order to form other intimate relationships (Minuchin, 1974).

Gavazzi and Sabatelli (1990) investigated the relationship between family differentiation (boundary maintenance), individuation, and psychosocial development among adolescents and young adults. Family

system differentiation was assessed by examining family conflict and intrusiveness within the family system; individuation was assessed by examining levels of emotional reactivity and financial autonomy; and psychosocial maturity was assessed by utilizing Rosenthal, Gurney, and Moore's (1981) Eriksonian Psychosocial Stage Inventory. This measure assesses the first six stages of Erikson's psychosocial developmental paradigm (Trust, Autonomy, Initiative, Industry, Identity, and Intimacy). Theoretically, the successful resolution of Erikson's (1963) first four psychosocial stages is necessary for mature identity development and therefore is a reflection of identity maturity. Results with the EPSI Subscales intact indicate that the identity was negatively related to family conflict and intrusiveness, and financial autonomy, and positively related to psychological maturity. Likewise, with the subscales combined to produce an overall psychosocial maturity score, psychosocial maturity was associated with low family conflict, low family intrusiveness, and low emotional reactivity (a form of psychological independence). Again, individuation processes along with boundary maintenance within the family shared a significant relationship with psychosocial maturity and, hence, identity (and psychosocial) development.

Similarly, Campbell et al. (1984) found that achieved and moratorium adolescents perceived relationships with their parents as encouraging of independence. This is consistent with the notion that Information-oriented self-theorists actively explore options in decision-making strategies and, therefore, may learn these skills within

the context of the family. Conversely, foreclosed individuals report higher levels of affection with their mothers and less family conflict than diffused respondents (Campbell et al., 1984; Willemsen & Waterman, 1991). Since foreclosed individuals rely more on prescriptions from family members, they would tend to be more closely linked to the family and their edicts (or roles) concerning conflict resolution. On the other hand, diffusion has been found to be associated with low family cohesion and low encouragement for cultural and intellectual development (Willemsen & Waterman, 1991). These individuals may perceive their family environment as disorganized, which, in turn, may discourage active commitments. Among females, Adams and Jones (1983) found that identity achievement and moratorium were associated with less controlling or regulating parental behavior, and with mothers who were encouraging of independence. Likewise, fathers in this group were perceived as fair in their punishments (Adams & Jones, 1983).

Summary

These findings support the notion of exploring perceptions of family functioning among individuals who preferentially occupy the differential identity "styles" and who use or abuse substances. Patterns of communication, family roles (or edicts), problem-solving strategies, affective development (responsiveness to others' needs), and control/independence are among the family issues relevant to adolescent and young adult development. These family variables likely influence adolescent and young adult substance use; however, the influence appears

to be mediated by identity development. Those who preferentially use Diffuse/Avoidant information processing strategies tend to use and abuse substances more readily despite the heretofore unassessed family influences. On the other hand, family relations characterized by lack of control and encouragement for intellectual pursuits are more likely to contribute to adolescent diffusion.

The general research question for this study, then, is: Is substance use by young adults influenced by the family and mediated by personal identity style? It is beyond the scope of this investigation to relegate a causal link between family functioning and identity style concerning substance use and abuse since the influence, if looked at systemically, is likely reciprocal. Thus, the nature of the feedback mechanism within the family will not be deciphered in the current research project. Nevertheless, by incorporating the social network of the family as it influences the identity development of the individual and subsequently substance use, psychosocial explanations of adolescent and young adult substance use and abuse will become more meaningful.

CHAPTER III

METHODS

The methods used in exploring the mediating effects of identity style on the relationship between family functioning and substance use among young adults are presented in this chapter. First, characteristics of the two samples collected for this study are introduced followed by seven hypotheses that guide this inquiry. Concluding this chapter is information regarding measurement, research design, and the specific procedures used in gathering the data.

Sample

Within this study, young adulthood is defined as an individual between the ages of 17 and 25. Data for this research project were gathered from two different sources. The first is referred to as the treatment sample and was composed of individuals who were actively seeking substance abuse counseling at the New Choices Program in Logan, Utah. The second group is referred to as the university sample and was composed of individuals who were currently enrolled in an undergraduate university philosophy course. Following is specific information concerning these samples.

Treatment Sample

Data were acquired from 57 individuals between the ages of 18 and 25 who had applied for services for outpatient substance abuse treatment from the Office of Social Services Substance Abuse Program serving Cache

County, Utah (New Choices Program). The data were garnered from the ongoing research and evaluation project being implemented by the organization. Of the 94 who completed and returned the questionnaire for the study, 34 (36%) were eliminated based on their age (older than 25) and 3 others were dropped due to incomplete data. Of those who completed the questionnaire, most were male, Caucasian, and were not married. More specific information concerning the demographic data for the two samples is provided in Table 1.

University Sample

The university sample consisted of 51 university students from ages 17 to 25 who were enrolled in a sophomore-level Deductive Logic liberal arts class at Utah State University. Fifty-four were initially surveyed with 3 being dropped because they did not meet the age requirement. In comparison to the treatment sample, there were more females who comprised the university sample. Of those surveyed, most were Caucasian and were not married.

Hypotheses

The general research question for this study (Is the relationship between family functioning and substance use mediated by identity style?) has general implications for several distinct hypotheses. Initially, comparison hypotheses are presented in order to demonstrate, in null form, anticipated relationships between the university sample and the treatment sample. These hypotheses are included in order to demonstrate the utility of the identity style paradigm of adolescent and

Table 1

Demographic Information for the University and TreatmentSamples

	Sample	
	University	Treatment
	($n = 51$)	($n = 57$)
<u>Age</u>		
17-20	29 (57%)	25 (44%)
21-25	22 (43%)	32 (56%)
<u>Gender</u>		
Male	25 (49%)	50 (88%)
Female	26 (51%)	7 (12%)
<u>Ethnicity</u>		
Caucasian	48 (94%)	52 (90%)
African American	0 (0%)	1 (2%)
Asian	1 (2%)	2 (4%)
Native American	0 (0%)	1 (2%)
Other	2 (4%)	1 (2%)
<u>Marital Status</u>		
Married	6 (12%)	4 (7%)
Not Married	45 (88%)	53 (93%)

young adult substance use and abuse by comparing university sample responses to the sample of young adults in substance abuse treatment.

The null hypotheses for the comparison analyses are as follows:

1. There will be no difference between university students and individuals in substance abuse treatment concerning use of substances.
2. There will be no difference between university students and individuals in substance abuse treatment in preferred identity style (Information, Normative, Diffuse/Avoidant).
3. There will be no difference between the university students and individuals in substance abuse treatment in overall family functioning.

Hypotheses that include both the university sample and the treatment sample are as follows:

4. There will be no difference between the identity styles in reported use of substances.
5. There will be no difference between those who have used substances and those who have not in relation to family functioning.
6. There will be no difference between the identity styles in relation to family functioning.
7. There will be no mediating relationship of identity style in relation to family functioning and substance use.

Design

This study utilized a cross-sectional sampling approach. The outcome variable (frequency of substance use) and mediating variables (identity style and family functioning) were assessed at one point in time by collecting individual-level data through self-report questionnaires.

Measurement

Identity Style Inventory

The Berzonsky (1989) Identity Style Inventory (ISI) was used to assess identity style among the university sample. The ISI is a 39-item questionnaire that measures strategies that individuals prefer to use when confronted with problems or decisions that require action (Berzonsky, 1989). Scores obtained on the ISI are used to assess the respondents' preferred identity style: Information-oriented, Normative-oriented, and Diffuse/Avoidant-oriented identity styles. Respondents rate items on a 5-point Likert-type scale of 1 = hardly ever true of me to 5 = almost always true of me. Identity style is assessed by responding to statements such as, "When making important decisions, I like to have as much information as possible" (Information Orientation).

Test-retest reliabilities on the ISI, over a 5-week interval, varied from .78 () to .86 (Information), and reliability estimates (Cronbach's alpha) were .53 for Information, .52 for , and .59 for Diffuse/Avoidant (Berzonsky, 1989). Although the reliabilities are moderate at best, they are similar to other measures of identity development (see Grotevant & Adams, 1984; Objective Measure of Ego Identity Status). Construct validity has also been established by correlating the identity styles with Marcia's identity status measured by the Objective Measure of Ego Identity Status (Grotevant & Adams, 1984). The diffused status by Diffuse/Avoidant style yielded a correlation of .62; foreclosed status by style yielded a correlation of .47; and an achieved status by Information style yielded a correlation

of .25 (Berzonsky, 1989). The moratorium status by Information style correlation did not reach significance ($r = .06$); however, when the effects of the commitment scale were partialled out, a significant relationship was found ($r = .34$) (Berzonsky, 1992).

Identity Style Inventory: Codependent
Relationship Inventory Revision

The Codependent Relationship Inventory was used to assess identity style among the treatment sample participants. The Codependent Relationship Inventory (CORI) was developed by DeBrown, Jones, and Shaw (1990) as a measure designed to assess codependence. The measure was developed utilizing existing scales that were conceptually related to core definitions of codependence (DeBrown et al., 1990). The measure included scales that assessed psychosocial maturity, self-esteem, social desirability, and identity style. The Identity Style Inventory developed by Berzonsky (1989) was used to assess identity style within the measure, although not all items were included. In an attempt to develop an adequate scale to measure codependence, scale scores were correlated with both self-report and clinician ratings of codependence and items were removed that did not exhibit a strong relationship with these ratings (DeBrown et al., 1990). As a result, eight items were retained from the Diffuse/Avoidant Subscale, three items were retained from the Commitment Subscale, two items were retained from the Information Subscale, and two items were retained from the Normative Subscale.

Reliability estimates for the identity style items contained within the CORI are not reported; however, correlations between the other subscales suggest that the scales behave as expected. The Information-Orientation Subscale correlated positively with all measures of psychosocial maturity assessed by Rosenthal et al.'s, (1981) Eriksonian Psychosocial Stage Inventory (EPSI) (trust $r = .25$; autonomy $r = .25$; agency $r = .39$; achievement $r = .16$; identity $r = .24$; and intimacy $r = .19$). The Diffuse/Avoidant Orientation Subscale correlated positively with the Normative Subscale ($r = .36$) and negatively with all six subscales of the EPSI (ranging from $r = -.41$ to $r = -.46$). The Normative Orientation Subscale was negatively related to trust ($r = -.23$), autonomy ($r = -.24$), agency ($r = -.21$), and identity ($r = -.26$; DeBrown et al., 1990). These results suggest that the identity style items included in the CORI have maintained adequate construct validity for the purposes of this study.

Family Assessment Device

The McMaster Family Assessment Device (FAD) was used to assess perceived family functioning among respondents. The FAD is a self-report measure based on the McMaster Model of Family Functioning (MMFF) and "describes [the] structural and organizational properties of the family group and the patterns of transactions among family members" (Epstein, Baldwin, & Bishop, 1983). The measure consists of six scales, with a seventh 12-item scale (General Functioning) that incorporates items similar to those found in each of the other scales. The six scales assess the six dimensions of the MMFF, which include: Problem

Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, and Behavioral Control.

1. Problem Solving assesses the family's ability to solve problems at a level that maintains family functioning (6 items).
2. Communication assesses whether the verbal messages that are exchanged between family members is "clear with respect to content and direct in the sense that the person spoken to is the person whom the message is intended" (Epstein et al., 1983, p. 172) (9 items).
3. Roles assesses whether the family has organized patterns of behavior for operating family functions, which include: "provision of resources, providing nurturance and support, supporting personal development, maintaining and managing the family systems and providing adult sexual gratification" (Epstein et al., 1983, p. 172). Also, assessment of Roles includes consideration of assigned tasks within the family and whether they are carried out responsibly (11 items).
4. Affective Responsiveness assesses the degree to which family members express appropriate affect in the presence of a range of stimuli (6 items).
5. Affective Involvement is similar and assesses the degree to which family members are interested in and take value in other members concerns (7 items).
6. Behavior Control assesses the way in which family members maintain standards of behavior within the family system (9 items).

The FAD is a 60-item measure with a Likert-type response format ranging from 1 = Strongly Agree to 4 = Strongly Disagree. Some items

describe healthy functioning while others describe unhealthy functioning. Respondents reply to statements such as "You can easily get away with breaking the rules" (Behavior Control), or "We resolve most everyday problems around the house" (Problem Solving). For purposes of this study and for greater ease in interpreting results, the response format will be reversed in order to clarify direction of effects. With the responses reversed, higher means will translate into more functional attributes in the family (rather than vice versa).

Test-retest estimates for the current 60-item version have not been presented in the literature; however, test-retest estimates of a previous version of the FAD (which includes 53 items all contained in the 60 item scale) are reported as: Problem Solving (.66), Communication (.72), Roles (.75), Affective Responsiveness (.76), Affective Involvement (.67), Behavior Control (.73), and General Functioning (.71) (Miller, Epstein, Bishop, & Keitner, 1985). Reliability estimates (Cronbach's alpha) for the current 60-item version are available and are reported based on three different samples (nonclinical, psychiatric, medical). The nonclinical sample included family members who reported no history of psychological or medical disorders ($n = 627$), the psychiatric sample consisted of psychiatric patients and their families ($n = 1,138$), and the medical sample consisted of families with a medically disabled family member ($n = 298$) (Kabacoff, Miller, Bishop, Epstein, & Keitner, 1990). Reliability estimates for these sample are reported as: Problem Solving (.74 - .80), Communication (.70-.76), Roles (.57-.69), Affective Responsiveness

(.73-.75), Affective Involvement (.70-.78), Behavioral Control (.70-.73), and General Functioning (.83-.86) (Kabacoff et al., 1990). The scales appear to be moderately dependent on one another with correlations ranging from .4 to .6 between subscales (based on prior 53-item version; Epstein et al., 1983).

Concurrent validity with the prior 53-item version of the FAD has been established with other family scales (FACES-II, Family Unit Inventory; cited in Miller et al., 1985) obtaining results theoretically consistent with the FAD scales (Miller et al., 1985). For example, the Family Integration scale of the Family Unit Inventory (FUI) refers to the cohesive and positive nature of the family (cited in Miller et al., 1985). This scale correlated significantly with the Problem Solving, Communication, Affective Responsiveness, and Involvement scales of the FAD (-.67, -.66, -.61, and -.51 respectively; negative correlations are due to differences in scale directionality), indicating a substantial relationship between scales and offering evidence for the concurrent validity of the FAD (Miller et al., 1985).

Poly-Drug Use History Questionnaire

The Poly-Drug Use History Questionnaire, developed by Lewis, Conger, McAvoy, and Filsinger (1979), will be used to assess substance use among the respondents. The Poly-Drug Use History Questionnaire is a self-report measure that assesses the frequency of use of 15 drugs or classes of drugs during the 4 weeks prior to completion of the questionnaire. The drug classes in the assessment include: hallucinogens, stimulants, cocaine, amyl or butyl nitrite, barbiturates,

other downs, alcohol, tranquilizers, heroin, methadone, other opiates, inhalants, phencyclidine, tobacco, and marijuana. Drug use scores were assessed on a seven-point Likert-type response format ranging from "Zero Times" to "40 or More Times."

Criterion validity for the Poly-Drug Use History Questionnaire was assessed using urinalysis testing. A sample of 148 adolescents who were referred for drug rehabilitation completed the Poly-Drug Use History Questionnaire and a urine test. Results showed that less than 5% of respondents tested positive for marijuana use while reporting not using marijuana on the Poly-Drug Use History Questionnaire (Volk, Edwards, Lewis, & Sprenkle, 1989).

Procedures

During the initial intake of clients at the Office of Social Services Substance Abuse Program, individuals were given the New Choices Evaluation Packet. Questionnaires were distributed and completed by each individual within the first two sessions of treatment. The New Choices Evaluation Packet contained a variety of measures; however, those relevant to this study include: (a) Codependent Relationship Inventory (DeBrown et al., 1990), (b) Family Assessment Device (Miller et al., 1985), and (c) Poly-Drug Use History Questionnaire (Lewis et al., 1979). Demographic information was provided by the New Choices Program based on materials obtained during intake procedures. A statement accompanied the materials assuring the confidentiality of all responses and describing that the use of the data is for ongoing

research and evaluation. Each questionnaire was given an identification number that was used for follow-up purposes only by the Office of Social Services. The researchers and clinicians were not provided with any identifying materials in order to maintain confidentiality.

For the comparison sample, students enrolled in an undergraduate deductive logic general education class at Utah State University were asked to complete the questionnaire. The questionnaire contained the Identity Style Inventory (Berzonsky, 1989), the Family Assessment Device (Miller et al., 1985), the Poly-Drug Use History Questionnaire (Lewis et al., 1979), and several demographic questions (age, sex, marital status, ethnicity, year in school, and religion). The questionnaire was administered by the author to the students during the last 20 minutes of class time. Participation in the project by the students was voluntary with a written protocol ensuring confidentiality accompanying the materials. In order to clarify any questions concerning the confidentiality of materials, the author read the informed consent to the class and fielded all questions and concerns.

A copy of the proposal for this study was submitted to the Utah State University Institutional Review Board and was approved on June 22, 1994. A copy of the approval letter can be found in Appendix D.

CHAPTER IV

RESULTS

Analyses of the data gathered are reported in this section.

Initially, reliability and validity estimates for the measures used will be presented along with scoring procedures. Then, results for the seven hypotheses presented in Chapter III will be reported.

Reliability and Validity

Identity Style Inventory: University
Sample

Since the complete Identity Style Inventory was only administered to the university sample, separate analyses were calculated for this sample ($N = 51$). Cronbach alpha coefficients were calculated to determine the internal consistency of the three subscales used in this study. The subscale estimates include: Information, .64; Normative, .73; and Diffuse, .70. These are comparable to estimates reported in the literature (Berzonsky, 1989; Berzonsky & Sullivan, 1992; Berzonsky, 1993b; Jones et al., 1992).

Pearson zero-order correlation coefficients were calculated among the three subscales in order to provide evidence for construct validity for the measure. The directionality of relationships between the subscales was similar to previous studies utilizing the identity style construct (Berzonsky, 1989; Berzonsky & Sullivan, 1992; Jones et al., 1992). The Information Orientation Subscale was not related to the Normative Subscale ($r = .09$, $p > .05$), and negatively related to the

Diffuse Orientation Subscale ($r = -.31, p < .05$). Since the Information and Normative Orientations utilize disparate strategies in solving problems and making decisions, it is theoretically consistent not to expect a strong relationship between the subscales. Conversely, it is theoretically inconsistent to be problem-focused and active in decision-making strategies (Information Orientation) and utilize an avoidant decision-making style (Diffuse/Avoidant Orientation). Likewise, the absence of a relationship between the Normative and Diffuse Subscales ($r = -.06, p > .05$) was expected. These relationships provide evidence for construct validity for the Identity Style Inventory for this study.

Identity Style Inventory (CORI):
Treatment Sample

Cronbach alpha coefficients were calculated in order to assess the internal consistency of the three subscales utilized in the treatment sample for this study ($N = 57$). The estimates were as follows: Information, .24; Normative, .43; and Diffuse/Avoidant, .72. Due to the reduced number of items retained for the Information and Normative Orientation Subscales, reliability estimates are substantially reduced. Because both scales contained two items, a .43 reliability coefficient for the Normative Orientation Subscale was deemed adequate for purposes of this study. However, due to the low reliability evidenced by the Information Orientation Subscale, it was not utilized in this study.

Pearson zero-order correlation coefficients were calculated between the Diffuse/Avoidant and Normative Orientation Subscales in order to provide construct validity for the Identity Style Inventory--

CORI Revision. Again, a theoretically consistent negative directional relationship was calculated ($r = -.13$, $p > .05$) between the subscales, suggesting the two subscales evidence construct validity.

Family Assessment Device

Cronbach alpha coefficients were calculated in order to determine internal consistency for the six Family Assessment Device Subscales utilized in this study ($N = 108$). The estimates were as follows: Problem Solving, .79; Communication, .83; Roles, .78; Affective Responsiveness, .82; Affective Involvement, .82; Behavioral Control, .74; and General Functioning, .91. These estimates are similar to those reported in the literature (Epstein et al., 1983; Kabacoff et al., 1990; Miller et al., 1985).

Pearson zero-order correlation coefficients were calculated in order to demonstrate construct validity for the Family Assessment Device. Results for these interscale correlations are presented in Table 2. As can be seen, all subscales were significantly related to one another. These correlations, when squared, suggest that the subscales share from 18% (Behavior Control vs. Communication) to 53% (Problem Solving vs. Affective Involvement) of the variance with one another. These findings are congruent with previous research utilizing this scale (Epstein et al., 1983; Kabacoff et al., 1990) and echo the proposed systemic relationship between the subscales as defined by the McMaster Model of Family Functioning (Epstein et al., 1983). The high multicollinearity between subscales, however, presents a concern for

Table 2

Family Assessment Device (FAD) Interscale Correlations and Reliabilities

	Construct Subscales					
	AI	AR	BC	CM	PS	RO
Affective Inv.	(.82)	.59	.43	.69	.51	.69
Affective Resp.	--	(.82)	.48	.70	.72	.56
Behavior Control	--	--	(.74)	.46	.58	.62
Communication	--	--	--	(.83)	.73	.61
Problem Solving	--	--	--	--	(.79)	.63
Roles	--	--	--	--	--	(.78)

Note. AI=Affective Involvement, AR=Affective Responsiveness, BC=Behavior Control, CM=Communication, PS=Problem Solving, RO=Roles. All correlations are significant ($p < .001$). () = Cronbach alpha coefficients.

construct validity in that the subscales do not appear to be independent as hypothesized.

A secondary principal components factor analysis was calculated with the subscales in order to evaluate the number of factors incorporated within the relationships. One factor (Family Functioning) emerged accounting for 66.9% of the total variance (see Table 3). Due to the nature of the factor there was no way to interpret it. The General Functioning Subscale, which incorporates aspects of each subscale, was utilized. The General Functioning Subscale has been tested and results have been shown to be meaningful in previous research

Table 3

Factor Loadings for a Secondary Principle Components Factor Analysis on the Family Assessment Device (N = 108)

Family Attributes	Factor 1 Family Functioning
Affective Involvement	.80
Affective Responsiveness	.83
Behavior Control	.72
Communication	.86
Problem Solving	.85
Roles	.84

(Miller et al., 1985; Fischer & Wampler, 1994). A Pearson correlation coefficient was computed between the Family Functioning Factor and the General Functioning scale and resulted in a significant relationship ($r = .86, p < .001$), further justifying use of the subscale.

Poly-Drug Use History Questionnaire

In order to assess the relationship of the 15 classes of substances identified in the Poly-Drug Use History Questionnaire, a principal components factor analysis utilizing the oblique method of rotation was calculated. It has been previously demonstrated that use of substances progresses in developmental stages, usually beginning with alcohol/tobacco, followed by marijuana, and continuing on to other

illicit drugs (Kandel, 1975). The Poly-Drug Use History Questionnaire only assesses use within the last 4 weeks; however, a similar trend was found. The factor analysis identified two different factors (see Table 4) with tobacco, alcohol, and marijuana constituting one factor (factor loadings from .65 to .87) and all other substances loading into the other factor (factor loadings from .77 to .98). Together, 83.6% of the total variance was explained by the two factors. These factor loadings mimic the developmental progression perspective of substance use in that the "gateway" drugs (tobacco, alcohol, and marijuana) load on a separate

Table 4

Pattern Matrix Factor Loadings for a Principle Components Factor Analysis Following Oblique Rotation on the Poly-Drug Use History Questionnaire

Factor	Factor 1 Illicit Substances	Factor 2 Gateway Drugs
Tobacco	-.12	.87
Alcohol	.15	.80
Marijuana	.34	.65
Hallucinogens	.86	.19
Stimulants	.77	.25
Cocaine	.94	.04
Tranquilizers	.92	.09
Opiates	.95	-.10
Inhalants	.98	-.15

factor than do the more illicit substances. The Poly-Drug Use History Questionnaire appears to function appropriately for inclusion in this study.

Scoring Procedures

Identity Style Inventory

It was hypothesized that substance use is related to identity style. Identity style scores were calculated based on the response to a five-point Likert-type scale for each question ranging from "Very Much Like Me" to "Very Much Unlike Me." Both the university and treatment sample versions of the measure were scored similarly. In order to evaluate the influence of identity style on substance use and family functioning among young adults two separate scoring procedures were utilized. First, for hypotheses 2, 4, and 6, raw scores for the two subscales retained for this study (Diffuse/Avoidant, and Normative) were standardized and the subject's highest z-score was used to designate the preferred identity style (Berzonsky, 1992). This yielded a categorical variable with two levels. Second, in order to assess hypothesis 7, the arithmetic mean of each subjects raw score was computed. For this hypothesis the mean score was utilized in order to standardize responses between the disparate versions of the measurement used and to provided an interval level score from which to assess the mediating influence of identity style on substance use.

Family Assessment Device

It was hypothesized that family functioning, as assessed by the Family Assessment Device (Epstein et al., 1983), is related to substance use and is mediated by identity style. Because the six subscales defined only one factor, the General Functioning Subscale was utilized in order to assess family functioning. The General Functioning Subscale was responded to on a four-point Likert-type scale ranging from "Strongly Agree" to "Strongly Disagree." Scoring procedures were similar for all hypotheses.

In order to evaluate the influence of family functioning on substance use and identity style, an arithmetic mean was calculated for the subscale's raw score (Epstein et al., 1983). This provided an interval-level score from which to determine directional influence of family functioning for greater ease in interpreting results. The response format was also reversed: A higher mean score was translated into a more functional aspect of family functioning.

Poly-Drug Use History Questionnaire

The authors of the Poly-Drug Use History Questionnaire (Lewis et al., 1979) suggested a scoring protocol that as evaluated by the present author. The suggested protocol collapsed all drug classes into one variable that assessed severity of use. This scaling strategy yielded a highly skewed distribution with large standard deviations. It was abandoned, and the Likert-type response format was utilized in a principal components factor analysis that assessed the intercorrelations of each drug class. Results presented previously suggest that the drug

classes can be reduced to two factors, which explain 83.6% of the total variance (see Table 4). Based on these findings, scoring for drug use was consolidated into two categorical variables with two levels: nonuse and use. The first variable incorporated nonuse/use of tobacco, alcohol, or marijuana (Gateway Drugs), while the second variable incorporated nonuse/use of all other substances assessed (Illicit Substances). These categories incorporate results from the factor analysis and provide a more accurate representation of the level of substance use assessed in this study.

Hypotheses Testing

Seven hypotheses guide this study. Initially, comparisons between the university sample and treatment sample were computed to demonstrate similarities and dissimilarities inherent between the samples. The first three hypotheses guide this inquiry, followed by the remaining four hypotheses, which develop the research question for this study. Presentation of the results will begin with a brief description of the operationalization of the variables followed by a summary of the statistical tests utilized. Justification for each statistical test will be included as well as relevant post hoc analyses.

Between Sample Analyses

Null hypothesis 1: There will be no difference between university students and individuals in substance abuse treatment concerning use of substances.

Use of substances was calculated as two categorical variables, each with two levels: nonuse and use. Because both variables are categorical in nature, a 2 (substances used) X 2 (sample) chi-square test was utilized for this analysis. The expected frequencies for each category were assumed to be equal (null hypothesis).

The chi-square test for the Gateway Drugs (nonuse/use) by sample was significant ($\chi^2 = 30.97$, $p < .001$; $\phi = -.54$, $p < .001$), suggesting that the null hypothesis can be rejected for this class of substances. Squaring phi yields an effect size for this analysis, which indicates that 29% of the variance between Gateway Drugs and Sample is shared. In the treatment sample, 82% of respondents reported use of the Gateway Drugs in the last 4 weeks compared to only 29% of the university sample (see Table 5). This is congruent with the expectation that those receiving treatment for substance abuse concerns would use substances more often.

Chi-square analyses for use of Illicit Substances by sample was not significant ($\chi^2 = 3.46$, $p > .05$; $\phi = -.18$). Squaring phi in this analysis suggests that only 3% of the variance is shared. Based on these results, the first hypothesis can be rejected for the Gateway Drugs but not for the Illicit Substances.

Null Hypothesis 2: There will be no difference between university students and individuals in substance abuse treatment in preferred identity style (Normative, and Diffuse/Avoidant).

Table 5

Frequencies of Gateway Drug Use by Sample (N = 108)

Gateway Drugs	Treatment Sample	University Sample
Nonuse	10 (18%)	36 (71%)
Use	47 (82%)	15 (29%)

Identity style was calculated from the standardized raw scores of each subscale for the combined samples. The highest z-score was used to assess preferred identity style (Berzonsky, 1992). Based on the categorical nature of both variables in this analysis, a 2 (identity style) X 2 (sample) chi-square test was again used. The expected frequencies for each category were assumed to be equal (null hypothesis).

Results indicate that the null hypothesis can be retained ($\chi^2 = 1.31$, $p > .05$; $\Phi = -.11$). Squaring Phi suggests that only 1% of the variance is shared in this model. In the treatment sample, 44% were classified as Normative while 56% were classified as Diffuse/Avoidant. Similarly, 55% were classified as Normative and 45% were classified as Diffuse/Avoidant in the university sample (see Table 6).

Null Hypothesis 3: There will be no difference between the university students and individuals in substance abuse treatment in overall family functioning.

Table 6

Frequencies of Respondents Classified for Identity Style by Sample(N = 108)

Identity Style	Treatment Sample	University Sample
Normative	25 (44%)	28 (55%)
Diffuse/Avoidant	32 (56%)	23 (45%)

The mean score for the General Functioning Subscale was compared between samples using a t test for independent groups. The results show that the null hypothesis can be retained ($t = -.92$, $p > .05$). There was no difference between the samples in relation to family functioning. The mean scores for the treatment sample, 3.00 ($SD = .64$), and the university sample, 3.10 ($SD = .54$) were in the expected direction but did not reach significance. The standardized mean difference for this comparison was calculated at .18.

Combined Sample Analyses

The remaining four hypotheses are guided by the research question for this study. The question was answered statistically by combining the university sample with the treatment sample, yielding a total sample of 108. The combination of these samples, in the final analyses was designed to further aid in the examination of the influences of family functioning and identity style on substance use by increasing the variability in reported use of substances. However, because the

Table 7

Frequencies of Gateway Drug Use by Identity Style (N = 108)

Gateway Drugs	Normative (n = 53)	Diffuse/Avoidant (n = 55)
Nonuse	29 (55%)	17 (31%)
Use	24 (45%)	38 (69%)

Information Orientation Subscale for the treatment sample measures was not reliable, it was not included in these combined analyses.

Null Hypothesis 4: There will be no difference between the identity styles in reported use of substances.

Both substance use and identity style were scored as binary categorical variables. Therefore, two 2 (substance use) X 2 (identity style) chi-square tests of independence were computed in order to test this hypothesis. A significant coefficient resulted for Gateway Drugs ($\chi^2 = 6.26$, $p < .05$; $\phi = .24$), but not with the Illicit Substances ($\chi^2 = 1.98$, $p > .05$; $\phi = .14$). For Gateway Drug use, Phi squared results in an effect size showing 6% of the variance is shared by identity style and the Gateway Drugs while only 2% was explained by Illicit Substances. As shown in Table 7, 69% of Diffuse/Avoidant Orientation respondents reported use of Gateway Drugs compared to 45% of Normative-orientated respondents. This disparity indicates that the null hypothesis can be rejected in relation to Gateway Drug use. That

the Illicit Substances model did not reach significance may be related to the low level of Illicit Substance use reported overall ($n = 13$).

Null Hypothesis 5: There will be no difference between those who have used substances and those who have not in relation to family functioning.

Two t tests for independent groups were computed to evaluate the differences between nonuse/use of substances and the General Functioning Subscale mean score. Results suggest that the hypothesis cannot be rejected for either substance factor (Gateway Drugs, $t = 1.75$, $p > .05$; Illicit Substances, $t = 1.56$, $p > .05$). Differences between mean scores for non-use of Gateway Drugs, 3.16 ($SD = .58$), and use of Gateway Drugs, 2.96 ($SD = .60$), were in the expected direction but were not significant. Likewise, differences between mean scores for nonuse of Illicit Substances, 3.08 ($SD = .60$), and use of Illicit Substances, 2.81 ($SD = .55$), were not significant. Standardized mean differences for these comparisons were calculated at .34 and .48, respectively.

Null Hypothesis 6: There will be no difference between the identity styles in relation to family functioning.

Identity style was calculated as a categorical variable with two levels and was entered as a grouping variable in a t test for independent groups with the General Functioning mean scores. Results indicate that the hypothesis can be rejected ($t = 3.70$, $p < .001$). General Functioning mean scores for the Normative Orientation ($X = 3.25$, $SD = .51$) were significantly different from the Diffuse/Avoidant Orientation ($X = 2.85$, $SD = .61$). The standardized mean difference for

these results was calculated at .72. Those who were classified as Normative reported more healthy family functioning than those who were classified as Diffuse/Avoidant.

Null Hypothesis 7: There will be no mediating relationship of identity style in relation to family functioning and substance use.

Both identity style and family functioning were calculated as the arithmetic mean of the subscale retained for the combined sample analyses. Identity style mean scores were used in order to more fully partial out their influence in the regression analyses. In order to assess the mediating effects of identity style between substance use and family functioning, the identity style mean scores were entered first in a stepwise logistic regression analysis followed by the General Functioning mean score. In a separate analysis, the family functioning mean score was entered first followed by the identity style mean scores. Taken together, these analyses should illuminate the relationship between family functioning, identity style, and substance use.

Analyses were calculated for the Gateway Drugs with identity style entered first. The Normative Orientation factored out as a predictor variable ($B = -.82$, Wald = 11.33, $p < .001$). The negative logistic regression coefficient suggests a negative relationship with Gateway Drug use. When the General Functioning Subscale was entered into the equation, no further variables were significant. Combined, this model resulted in a significant chi-square model fit ($\chi^2 = 13.05$, $p < .001$). Conversely, when the General Functioning Subscale was entered followed

by identity style, the family functioning attribute did not factor out (similar to results in hypothesis 5) while the Normative Orientation Subscale factored out in the end (similar coefficient as presented above). A canonical correlation coefficient was computed between Gateway Drug use and the Normative Orientation mean score ($\bar{x} = .34$, $p < .001$). Squared, this coefficient indicates that 12% of the variance in Gateway Drug use is explained by the Normative Orientation. In analyses for the Illicit Drugs, results were insignificant for all variables. Based on the above results, the null hypothesis was accepted.

CHAPTER V

SUMMARY AND DISCUSSION

Results from this study have shown that substance use is related to identity style but not to family functioning. Likewise, family functioning appears to discriminate between the identity styles. The following is a critical review of the findings in relation to the sample and relevant issues in measurement. Further observations are presented about the hypotheses as well as the limitations of this exploratory study. Potential application of these results in relation to intervention efforts designed to reduce substance use among young adults will also be presented.

Methodological Summary

This study was designed to evaluate the mediating effects of identity style in the relationship between family functioning and substance use among young adults. Previous evidence has supported a link between identity style and substance use (Jones & Hartmann, 1988; Jones et al., 1992) with the Diffuse/Avoidant Orientation reporting higher levels of use compared to the other styles (Information and Normative Orientation). A link has also been established between family functioning and substance use with lower levels of functioning being highly predictive of substance use and abuse (Baumrind, 1991; Brook et al., 1990). Finally, strong support for the relationship between family functioning and identity style has been established. Results suggest that family functioning attributes (communication, differentiation,

etc.) differentiate the identity styles with more healthy attributes correlating with high psychosocial maturity (Grotevant & Cooper, 1986; Gavazzi & Sabatelli, 1990; Campbell et al., 1984). The current research study was an attempt to clarify the influences each has on substance using behaviors by evaluating the interrelationships between identity style, family functioning, and substance use.

In order to evaluate the research question defined above, two separate samples were surveyed to evaluate substance-using behaviors displayed by young adults. The first sample was comprised of individuals who were enrolled to receive substance abuse treatment at the New Choices Program through the Office of Social Services in Logan, Utah. The second sample was comprised of university students who were enrolled in a Deductive Logic general education class meeting in the fall quarter of the 1994-95 school year at Utah State University in Logan, Utah.

Preferred identity style was assessed in two ways: by using the arithmetic mean of the responses to the Identity Style Inventory (Berzonsky, 1989), and by taking the respondent's highest z-score among the styles for classification purposes. By utilizing the mean scores, the Identity Style Inventory demonstrated adequate reliability for the university sample respondents (from .64 to .73). The Codependent Relationship Inventory (DeBrown et al., 1990), which incorporated only 15 of the questions in the ISI, was administered to the treatment sample but did not fare as well. Due to low reliability estimates for the Information Orientation Subscale (Cronbach's $\alpha = .24$), statistical

analyses for this subscale in the treatment sample had to be abandoned. Interscale correlations between the identity style orientations for both samples appeared to be consistent with previous research and suggested adequate construct validity for this study.

The General Functioning Subscale of the Family Assessment Device (Epstein et al., 1983) was utilized in order to evaluate family functioning among the samples respondents. In the McMaster Model of Family Functioning, six family attributes are evaluated and compared in order to give an overall impression of family functioning. The six attributes were highly correlated with one another and factor analysis demonstrated difficulty in interpreting the subscales. The General Functioning Subscale was retained and demonstrated adequate reliability for this study (Cronbach's alpha = .91).

The Poly-Drug Use History Questionnaire (Lewis et al., 1979) was administered to the respondents in both samples in order to evaluate substance-using behaviors. Lewis et al. (1979) have suggested a scoring procedure that collapses all substances used into one score of severity of use. This score did not appear useful for the present study and based on results of a factor analysis, use was assessed as two categorical variables of use/nonuse for Gateway Drugs (tobacco, alcohol, and marijuana) and Illicit Substances (cocaine, hallucinogens).

Summary of Findings

Between-Sample Findings

Between-sample analyses were run for two reasons. First, it was important to assess differences between each sample. Differences would be expected given the nature of the samples. Second, comparison analyses would also provide added validity to the identity style paradigm of problem behavior among adolescents and young adults. According to Jones (1994), the identity developmental perspective on adolescent problem behavior has provided adequate evidence to support the contention that identity style does mediate substance use and other problem behaviors. Therefore, it would be expected that those who use substances more often (i.e., treatment sample respondents) would also espouse a more Diffuse/Avoidant Orientation in approaching difficulties.

The first hypothesis was supported by the analyses. Individuals in substance abuse treatment did report more Gateway Drug use than the university students. Of the 57 treatment respondents retained for this study, 82% reported use of tobacco, alcohol, or marijuana (Gateway Drugs) at some time during the last 4 weeks compared to 29% of the respondents in the university sample ($n = 51$). This is congruent with expectations that those applying for substance abuse treatment would be more likely to report substance use.

Expected differences between the samples in relation to preferred identity style and family functioning attributes were not supported in the analyses. Theoretically, it would be anticipated that those in treatment would prefer the Diffuse/Avoidant Orientation over other

orientations. The identity developmental perspective suggests that those who prefer solving difficulties through procrastination and avoidance often report more use of substances (Jones et al., 1992).

Several explanations may account for this discrepancy. First, since the Information Orientation Subscale of the Codependent Relationship Inventory's incorporation of the Identity Style Inventory was not reliable, many subjects were diverted to the other preferred statuses. It is difficult to assess how many of the respondents would have been reclassified as an Information Orientation if the scale were intact. It would be theoretically consistent to suspect that many of the Information-oriented respondents would have been reclassified as Normative in that these orientations share the element of commitment. Consequently, because similar classification procedures were implemented for the university sample, it would still be expected that a Diffuse/Avoidant Orientation would predominate in the treatment sample. There was no evidence to support this supposition.

Likewise, the hypothesis suggesting that family functioning attributes would vary between samples was not supported by the analyses. The link between family functioning and substance use has been firmly established and would suggest that due to the high frequency of substance use reported in the treatment sample, less functional family attributes would have been assessed (Baumrind, 1991; Brook et al., 1990; Brook et al., 1985; Newcomb & Bentler, 1988b). Results in this study, however, show that there was no difference in reports of family functioning between the samples. This may be due to the difficulty in

measurement encountered when utilizing the General Functioning Subscale of the Family Assessment Device. Previous research has found difficulty in the discriminative ability of all Family Assessment Device Subscales in relation to alcohol use in a treatment sample (McKay, Longabaugh, Beattie, Maisto, & Noel, 1992).

Combined Sample Findings

Samples were combined in order to provide an adequate sample size as well as to broaden the variability in reported use of substances to more accurately assess the research question for this study. Preliminary analyses were run to confirm that the characteristics of this sample echo those reported in the literature on identity style, family functioning, and substance use. Hypotheses 4, 5, and 6 were designed to meet these criteria for evaluation of hypothesis 7 (analysis of the research question). The statistical tests, however, did not completely support previous findings.

Based on the identity developmental paradigm of problem behavior, it was hypothesized that substance use would have been reported more often by those who prefer a Diffuse/Avoidant identity style and least often by those who report a Normative Orientation. Jones and Hartmann (1988) found that high-school students who were classified as Diffuse reported use of substances most often when compared to the other identity statuses. The foreclosed identity status reported the least use and the achieved and moratorium status reported use somewhere between these two extremes.

Examination of the findings in this study shows similar results. In combined sample analyses, which only incorporated the Normative and Diffuse/Avoidant Subscales, 69% of Diffuse/Avoidant respondents reported use of the Gateway Drugs compared to only 46% of the Normative respondents. This difference of more than 20% was statistically significant. Although the use of substances by the treatment sample respondents inflated the scores, differences were still found. Consistently, the Diffuse/Avoidant-oriented respondent reported more use of Gateway Drugs regardless of sample affiliation. The low effect size (6%), however, suggests that these findings should be evaluated cautiously. It appears there is much more involved in the decision to use substances than identity style orientation among young adults. Perhaps by young adulthood, a consist pattern of substance use has been established, which is only minimally influenced by decision-making strategies.

Analyses utilizing the General Functioning Subscale of the Family Assessment Device (Epstein et al., 1983) did not reach significance for substances used. That none of the differences achieved significance is curious. This may be due to the lack of utility of the six family functioning subscales assessed by the questionnaire. This is congruent with previous use of the Family Assessment Device in substance using samples. McKay et al. (1992) utilized all seven subscales in correlations with alcohol use among a treatment sample. Only one subscale reached significance (Behavior Control) and this relationship was weak at best ($r = .15$). These researchers also performed a factor

analysis on the Family Assessment Device and identified only one factor similar to the present study. McKay et al. (1992) combined responses for each subscale in order to assess overall family functioning but continued to have difficulty in the measure's ability to discriminate alcohol use among respondents. It is clear that the subscales in the Family Assessment Device should be used with extreme caution when used with substance-using families.

An analysis utilizing the General Functioning scale of the Family Assessment Device was also performed in an evaluation of identity style. Evaluation of overall family functioning appeared to differentiate the identity styles. Higher (more healthy) scores marked a Normative Orientation while lower (less healthy) scores marked the Diffuse/Avoidant Orientation. Miller et al. (1985) developed health/pathology cut-off scores for the General Functioning Subscale and report 3.00 (adjusted for reverse scoring in this study) as the cut-off mean score. Perceptions of family functioning above the cut-off are defined as healthy while those below the cut-off are defined as pathological. The Normative Orientation mean score ($X = 3.25$) was well above the cut-off while the Diffuse/Avoidant mean score ($X = 2.85$) was just below the cut-off. These results mimic previous findings presented earlier that link less healthy family functioning attributes with a Diffuse identity status (Campbell et al., 1984; Willemsen & Waterman, 1991; Adams & Jones, 1983).

Overall, results for hypotheses 4 and 6 in the combined sample analyses seemed to echoed previous research regarding substance use,

identity style, and family functioning. The next step was to combine these measures into one model to test the mediating effects of identity style on family functioning and substance use. These results, however, were difficult to interpret. In the combined sample analyses, with identity style entered first, the Normative Orientation factored out as the only significant predictor of Gateway Drug use. The negative relationship between the Normative Orientation mean score and substance use is similar to results found for hypothesis 4. However, with the difficulties encountered in the ability of the General Functioning Subscale to discriminate substance use, a firm conclusion cannot be drawn. Evidence is clear that the Family Assessment Device is not a suitable measurement of family functioning in substance-using populations (McKay et al., 1992; current study). Future studies should incorporate more appropriate family assessments in order to partial out the influences of family functioning on substance use.

Conclusions

Several of the results in this inquiry appear to mimic those reported in the literature. There was not enough evidence, however, to evaluate the research question hypothesized in this study. The limitations inherent in an exploratory study, as well as errors in measurement and design, may account for the lack of significance. These limitations will be discussed further, along with suggestions for future study.

Limitations and Recommendations

A review of the limitations of this exploratory study will be discussed along with the threats to validity. A discussion of the limitations is helpful in determining the confidence one can place in the results presented. Also, following this discussion, suggestions for future research and implications for those working with young adults who use and abuse substances will be evaluated.

Threats to Validity

Among the threats to internal validity is the lack of control of historical elements in the treatment sample. The respondents in the university sample were tested at one point in time, thus sharing the effects of history and offering consistency to results. Conversely, treatment sample respondents were initially evaluated as they were applying for services, with questionnaires being distributed over a 9-month period of time. This difficulty is inherent in any evaluative study (being completed by New Choices Program where data were gathered) and makes it impossible to control. However, these respondents also share a certain amount of history. The shared reactions toward the application process, as well as the shared basis for making the attempt to get help (substance-using behaviors), all contribute to a slightly more consistent history among respondents.

Another threat to validity is the nonrandomness of each sample assessed. Although random selection is best, the nature of the evaluative study at the New Choices Program at the Office of Social

Services would impede such attempts. Likewise, it would be difficult to evaluate and assess a control group of individuals who match the individuals in treatment but who do not report difficulties with substance abuse.

The demographic data elicited from the respondents in this study suggest that this was a highly homogeneous sample. Most were Caucasian, male, and single and reflect the views of a narrowly defined cohort. Results from this study must be considered within this framework and not be too readily generalized to other populations. Furthermore, most respondents were residents of Cache County, Utah. This location is considered to be religiously conservative, and lacks ethnic diversity.

Limitations in Measurement

As previously discussed, there were several limitations in the instrumentation utilized in this study. The Codependent Relationship Inventory's (DeBrown et al., 1990) retention of only 15 items from the Identity Style Inventory (Berzonsky, 1989) resulted in lowered reliabilities and the exclusion of the Information Orientation Subscale in the analyses. The exclusion of this subscale significantly limited interpretation of the results evaluated for the treatment sample. Although the Codependent Relationship Inventory demonstrated adequate validity as a whole (DeBrown et al., 1990), future use of the items separately within the subscales should be considered cautiously.

Concerns were also encountered in the utilization of the Family Assessment Device (Epstein et al., 1983). Again, as described earlier, the theoretically defined systemic relationship between the subscales of

the measure posed concerns. A factor analysis indicated that all six subscales tap into one attribute. Since this attribute was difficult to define, these subscales could not be utilized in the analyses, impeding attempts to specifically define those attributes that relate to use of substances. Likewise, previous research has shown that the Family Assessment Device is not an appropriate device to utilize for substance-using populations due to its inability to discriminate substance-using behaviors among respondents (McKay et al., 1992).

Implications for Intervention

Although the results in this study should be considered cautiously, there is evidence to support some general implications for intervention efforts designed to influence the link between family functioning, identity style, and substance use. A conceptualization of efforts designed to intervene in adolescent and young adult identity developmental processes has been offered. Papini (1994) suggested that interventions should be family-based and be implemented when the individuals are preadolescent, a natural transition period for families with burgeoning adolescents. In many cases, however, this early intervention model is not possible. For most young adults who exhibit problems with substance use, intervention efforts usually incorporate some form of therapy or participation in self-help groups such as Alcoholics Anonymous (AA), Narcotics Anonymous (NA), and so forth.

A family-based therapy approach with adolescents and young adults that focuses on the functional aspects of problem behavior has been

tested with some success in the research literature (see Alexander, 1992; Alexander & Parsons, 1982; Barton & Alexander, 1981). The Functional Family Therapy approach proposes that problem behavior (including substance use) has interpersonal payoffs or functions. These functions, which may be attained in unacceptable ways, echo Grotevant and Cooper's (1986) individuation model of identity development. Interpersonal behaviors and styles can be said to produce either merging (connectedness), separating (individuality), or midpointing (a combination of the two). This approach, in essence, is encouraging the family to address the identity-related concerns of their adolescent or young adult. However, the authors failed to specifically identify this aspect in their therapeutic approach (Alexander & Parsons, 1982).

Furthermore, the authors have suggested that the interpersonal function that problem behavior elicits can only be explained within its context (i.e., the family). The cognitive, behavioral, and emotional interactions of individual family members provides the key to assessing this interpersonal function. Likewise, the context of the family has been shown to be important in relation to a young adults interpersonal identity style (Adams & Jones, 1983; Campbell et al., 1984; Grotevant & Cooper, 1986). Therefore, the inclusion of the young adult's identity style and its interplay within the family context can be an important addition to this approach's cognitive/behavioral assessment strategies.

It has been discovered that cognitions and motivations for substance use discriminate the identity styles (Berzonsky, 1993a; Christopherson et al., 1988). These differing constructs can lead to

differing "themes" around the interpersonal functions, which can aid in the development of more appropriate intervention strategies. For example, in many instances, substance use among adolescents and young adults serves a separating function from the family and a merging function towards peers. In a young adult who espouses a Normative Orientation, intervention strategies would include the notion of authority and social norms to alter the substance-using behavior and provide an alternative context from which to produce a similar interpersonal function (Berzonsky, 1993a). Conversely, in a young adult who espouses a more Diffuse/Avoidant Orientation, intervention strategies would include the notion of impulse control and problem-solving strategies to alter substance-using behavior.

This addition adds to the utility of this functional approach and offers an alternative avenue of assessment for therapists who work with families with young adults who use or abuse substances. The inclusion of the identity style-based cognitive, motivational, and family factors inherent in individuals who use substances could be an important addition to the Functional Family Therapy approach. The identity style paradigm offers a model that is congruent with the assumptions of Functional Family Therapy and is easy to interpret.

Conclusion

Individuals with a Diffuse/Avoidant Orientation appear to report use of substances more often and report less functional family attributes. Conversely, Normative- and Information-oriented respondents

reported less use of substances and more functional family relationships. These findings could be a valuable tool to therapists and counselors who struggle in developing appropriate assessment strategies designed to generate change in young adult substance-using behaviors. Further examination into the interrelationships between identity style, family functioning, and substance use would further illuminate these processes and their impact on intervention strategies.

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APPENDICES

Appendix A:
Identity Style Inventory
(Berzonsky, 1989)

Appendix A-1

Identity Style Inventory

Directions: The following statements require your opinion as to whether they are like you or not. Please select a number between 1 and 5 that best reflects how much you personally feel that statement is like you or not like you.

For each question there are five (5) possible responses:

- 1 = very much like me
 2 = somewhat like me
 3 = not sure
 4 = somewhat unlike me
 5 = very much unlike me

1) Regarding religious beliefs, I know basically what I believe and don't believe.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike</u> me	<u>unlike</u> me

2) I've spent a great deal of time thinking seriously about what I should do with my life.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike</u> me	<u>unlike</u> me

3) I'm not really sure what I'm doing in life. I guess things will work themselves out.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike</u> me	<u>unlike</u> me

4) I've more-or-less always operated according to the values with which I was brought up.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike</u> me	<u>unlike</u> me

5) I've spent a good deal of time reading and talking to others about religious ideas.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike</u> me	<u>unlike</u> me

Appendix A-2

6) When I discuss issues with someone, I try to assume their point of view and try to see the problem from their perspective.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

7) I know what I want to do with my future.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

8) It doesn't pay to worry about values in advance; I decide things as they happen.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

9) I'm not really sure what to believe about religion.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

10) I've always had a purpose in my life. I was brought up to know what to strive for.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

11) I'm not sure which values I really hold.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

12) I have some consistent political views; I have a definite stand on where the government and country should be headed.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

13) Many times by not concerning myself with personal problems, they work themselves out.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

Appendix A-3

14) I'm not sure what I want to do with my future.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

15) I really enjoy the work I do (or have done in the past). It's the career that's right for me.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

16) I've spent a lot of time reading and trying to make sense out of political issues.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

17) I'm not really thinking about my future now; it's still a long way off.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

18) I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

19) Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

20) I'm not sure what occupation I should be in (or change to).

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

21) I've always known what I want to be and which training to pursue.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

Appendix A-4

22) I have a definite set of values that I use in order to make personal decisions.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

23) I think it's better to have a firm set of beliefs than to be open minded.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

24) When I have to make a decision, I try to wait as long as possible in order to see what will happen.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

25) When I have a personal problem, I try to analyze the situation in order to understand it.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

26) I find it's best to rely on the advice of a professional (e.g. clergy, doctor, lawyer) when I have a problem.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

27) It's best for me not to take life too seriously. I just try to enjoy it.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

28) I think it is better to have fixed values than to consider alternative value systems.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

29) I try to think about or deal with problems as long as I can.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

Appendix A-5

30) I find that personal problems often turn out to be interesting challenges.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

31) I try to avoid personal situations that will require me to think a lot and deal with them on my own.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

32) Once I know the correct way to handle a problem, I prefer to stick with it.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

33) When I have to make a decision, I like to spend a lot of time thinking about my problem.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

34) I prefer to deal with situations where I can rely on social rules and standards.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

35) I like to have the responsibility for handling problems in my life that require me to think on my own.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

36) sometimes I refuse to believe a problem will happen, and things manage to work themselves out.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

Appendix A-6

37) When making important decisions, I like to have as much information as possible.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

38) When I know a situation is going to cause me stress, I try to avoid it.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

39) To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals.

1	2	3	4	5
Very Much	Somewhat	Not Sure	Somewhat	Very Much
Like me	like me		<u>unlike me</u>	<u>unlike me</u>

APPENDIX B:

Family Assessment Device
(Kabacoff, Miller, Bishop, & Epstein, 1990)

Appendix B-1

Family Assessment Device

This next section contains a number of statements about families. Please read each statement carefully, and decide how well it describes your own family. You should answer as to how you see your family. If you are single, answer these statements in relation to your family-of-origin.

For each statement there are four (4) possible responses:

Strongly Agree (SA)	Check SA if you feel that the statement describes your family very accurately.
Agree (A)	Check A if you feel that the statement describes your family for the most part.
Disagree (D)	Check D if you feel that the statement does not describe your family for the most part.
Strongly Disagree (SD)	Check SD if you feel that the statement does not describe your family at all.

1. Planning family activities is difficult because we misunderstand each other.	SA	A	D	SD
2. We resolve most everyday problems around the house.	SA	A	D	SD
3. When someone is upset the others know why.	SA	A	D	SD
4. When you ask someone to do something, you have to check that they did it.	SA	A	D	SD
5. If someone is in trouble, the others become too involved.	SA	A	D	SD
6. In times of crisis we can turn to each other for support.	SA	A	D	SD

Appendix B-2

7. We don't know what to do when an emergency comes up.	SA	A	D	SD
8. We sometimes run out of things that we need.	SA	A	D	SD
9. We are reluctant to show our affection for each other.	SA	A	D	SD
10. We make sure members meet their family responsibilities.	SA	A	D	SD
11. We cannot talk to each other about the sadness we feel.	SA	A	D	SD
12. We usually act on our decisions regarding problems.	SA	A	D	SD
13. You only get the interest of others when something is important to them.	SA	A	D	SD
14. You can't tell how a person is feeling from what they are saying.	SA	A	D	SD
15. Family tasks don't get spread around enough.	SA	A	D	SD
16. Individuals are accepted for what they are.	SA	A	D	SD
17. You can easily get away with breaking the rules.	SA	A	D	SD
18. People come right out and say things instead of hinting at them.	SA	A	D	SD
19. Some of us just don't respond emotionally.	SA	A	D	SD
20. We know what to do in an emergency.	SA	A	D	SD
21. We avoid discussing our fears and concerns.	SA	A	D	SD

Appendix B-3

22. It is difficult to talk to each other about tender feelings.	SA	A	D	SD
23. We have trouble meeting our bills.	SA	A	D	SD
24. After our family tries to solve a problem, we usually discuss whether it worked or not.	SA	A	D	SD
25. We are too self-centered.	SA	A	D	SD
26. We can express feelings to each other.	SA	A	D	SD
27. We have no clear expectations about toilet habits.	SA	A	D	SD
28. We do not show our love to each other.	SA	A	D	SD
29. We talk to people directly rather than through go-betweens.	SA	A	D	SD
30. Each of us has particular duties and responsibilities.	SA	A	D	SD
31. There are lots of bad feelings in the family.	SA	A	D	SD
32. We have rules about hitting people.	SA	A	D	SD
33. We get involved with each other only when something interests us.	SA	A	D	SD
34. There's little time to explore personal interests.	SA	A	D	SD
35. We often don't say what we mean.	SA	A	D	SD
36. We feel accepted for what we are.	SA	A	D	SD

Appendix B-4

37. We show interest in each other when we can get something out of it personally.	SA	A	D	SD
38. We resolve most emotional upsets that come up.	SA	A	D	SD
39. Tenderness takes second place to other things in our family.	SA	A	D	SD
40. We discuss who is to do household jobs.	SA	A	D	SD
41. Making decisions is a problem for our family.	SA	A	D	SD
42. Our family shows interest in each other only when they can get something out of it.	SA	A	D	SD
43. We are frank with each other.	SA	A	D	SD
44. We don't hold to any rules or standards.	SA	A	D	SD
45. If people are asked to do something, they need reminding.	SA	A	D	SD
46. We are able to make decisions about how to solve problems.	SA	A	D	SD
47. If the rules are broken, we don't know what to expect.	SA	A	D	SD
48. Anything goes in our family.	SA	A	D	SD
49. We express tenderness.	SA	A	D	SD
50. We confront problems involving feelings.	SA	A	D	SD
51. We don't get along well together.	SA	A	D	SD
52. We don't talk to each other when we are angry.	SA	A	D	SD

Appendix B-5

53. We are generally dissatisfied with the family duties assigned to us.	SA	A	D	SD
54. Even though we mean well, we intrude too much into each others lives.	SA	A	D	SD
55. There are rules about dangerous situations.	SA	A	D	SD
56. We confide in each other.	SA	A	D	SD
57. We cry openly.	SA	A	D	SD
58. We don't have reasonable transport.	SA	A	D	SD
59. When we don't like what someone has done, we tell them.	SA	A	D	SD
60. We try to think of different ways to solve problems.	SA	A	D	SD

Appendix C:

Poly-Drug Use History Questionnaire
(Lewis, Conger, McAvoy, & Filsinger, 1979)

Appendix D:

Acceptance Letter from
USU Institutional Review Board

Appendix D-1


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DATE: November 14, 1994

TITLE: *Identity Style, Substance Use, and Perceived
Family Functioning Among Young Adults:
An Exploratory Study

PRINCIPAL INVESTIGATOR: Scot Allgood - PI
Larry Forthun - Student Researcher

FROM: True Rubal 

Our institutional committee reviewed and approved this proposal on July 22, 1994 contingent upon revised Informed Consent requesting that a form be prepared for the college students that participate and one for the substance abuse participants. The forms also need to include a contact person, phone number, name of class, no consequences for withdrawal statement, and a statement that there's no consequence to the participants treatment more. This form was received on Nov. 10, 1994. You may consider this your official approval letter. This approval covers the original protocol and the revised Informed Consent forms.

A study status report (continuing review) will be due in one year.

Please keep the committee advised of any changes, adverse reactions or termination of the study.

cc: Larry Forthun