Family dynamics and substance use in young adulthood

Jonathan White
Rowan University

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FAMILY DYNAMICS AND SUBSTANCE USE IN YOUNG ADULTHOOD

by

Jonathan White

A Thesis
Submitted in partial fulfillment of the requirements of the
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ABSTRACT

Jonathan White
FAMILY DYNAMICS AND SUBSTANCE USE IN YOUNG ADULTHOOD
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Drs. Epifanio and Dihoff
Master of Arts in School Psychology

An investigation was conducted examining the relationship between memories of family dynamics during the participants’ adolescent years and substance use during their young adulthood. To carry out this research, a sample of 118 participants (72 women and 46 men) was recruited from a small public university in southern New Jersey. Participants were required to fill-out surveys assessing their memories of their families’ patterns of interpersonal interactions and substance use. The statistical analysis of the data collected through the experimental procedures revealed several significant findings. Specifically, significant negative correlations were found between quality or frequency of health family dynamics and substance use. The findings are discussed in the context of the research presented in the review of literature. Finally, the limitations of the study and directions for future research are discussed.
ACKNOWLEDGEMENTS

I would like to dedicate this to my family and friends who have been there to support my
through this process. Further, I would like to thank Dr. Susan Field for challenging me to
learn the theory and practice of experimental psychology. If it was not for her steadfastness
and encouragement I may not have ever made it to this point. Finally, I want to mention Lucy
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CHAPTER I: INTRODUCTION

Need

Research indicates that use of alcohol and illicit drugs is the most serious health problem facing the United States. Of the different segments of the population in America, it has been shown that young adults, ages 18 to 25, engage in the highest levels of substance use (Ericson, 2001). This trend has had a serious impact on the individual users and on society as a whole. Substance use is known to affect motivation and cognitive functioning, and to contribute to mood disorders within individuals, while increasing their chance of accidental death or injury (Hawkins, Catalano, & Miller, 1992). In terms of societal impact, substance use has been shown to increase the cost of education, mental health services, and criminal adjudication, in addition to the cost of the health care system, and drug and alcohol treatment (Hawkins et al., 1992). Yet, there does not appear to be a wealth of research investigating drug use within the young adult population.

Elkins, King, McGue, and Iacono (2006) found that the transition from adolescence to young adulthood is characterized by an increase in substance use. Recognizing this fact, one must acknowledge that it is imperative to identify causes for this spike in substance use during this critical developmental period. Further, if research can identify these contributory factors, it may be possible to identify new or effective protocols for prevention and treatment.
Purpose

The purpose of this study was to examine the relationship between individuals’ memories of family dynamics variables during their adolescent years and substance use in young adulthood. The factors being investigated are the participants’ perceptions of parental involvement in their academics, social life, frequency of caring interactions between them and one parent, how close the participants felt to their parents, and parental marital quality.

Hypotheses

Based on the independent variable, it was hypothesized that participants’ who believed their parents’ marriage was in trouble for a substantial period of time would exhibit significantly higher scores the Face Valid Alcohol (FVA), Face Valid Other Drugs (FVOD), Symptomology (SYM), Obvious Attributes (OAT), Subtle Attributes (SAT), Defensiveness (DEF), Supplemental Addiction Measure (SAM), and Correctional (COR) scales of the Adult SASSI-3. Further, it was hypothesized that there would be significant negative correlations between parental marital quality during the participants’ adolescent years and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Next, it was hypothesized that there would be significant negative correlations between homework help and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Similarly, it was hypothesized there would be significant negative correlations personal problem help and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Further, it was hypothesized that there would be significant negative correlations between caring conversations and
the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. In addition, it was hypothesized that there would be a significant negative correlations between levels of displayed affection and the participants scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Finally, it was hypothesized that there would be significant negative correlations between parent-child relationship quality and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3.

Theory/ Background

Drug use during young adulthood can be conceptualized as the result of maladjustment during adolescence or childhood. Maladjustment during these stages of development can be linked to a multitude of factors or life changes. One of the most common and profound experiences a child can go through is the divorce of his or her parents. A factor that is commonly cited in the psychological literature regarding child adjustment in response to divorce is parental conflict. Parental conflict has been shown to be directly related to divorce and to the overall adjustment of children from divorced families (El-Sheikh & Whitson, 2006; El-Sheikh & Harger, 2001; Pruett, Williams, Insabella, & Little, 2003). Another factor that has been extensively researched within the divorce literature are levels of parental involvement in their child’s life. For example, Pruett et al. (2003) demonstrated that parental involvement can directly influence a child’s post-divorce adjustment and mediate other influential factors such as the extent of parental conflict. Further research conducted by Walden, McGue, Iacono, Burt, and Elkins (2004) points to the relationship between parent and child to be an extremely
powerful actor within the paradigm. Due to the frequency with which these factors are addressed in the divorce literature, they were central to this investigation. The research cited previously demonstrated the impact these family dynamics have on children. Further, one could argue that parental divorce per se does not lead to maladjustment in children; rather, the family dynamics, such as parental conflict and involvement, are more likely the factors that truly influence child outcomes (Pruett et al., 2003).

Definition of Terms

1. Gender- Participants’ self identified physical and mental sex.

2. Substance Use- Levels of use of alcohol, tobacco, or any illicit/ prescription drug taking behaviors as measured by the Adult Substance Abuse Subtle Screening Inventory (SASSI-3).

3. Young Adult- Developmental Period beginning at age 18 and ending at age 25.

4. Family dynamic variables – patterns of interpersonal interactions found within families. This variable is comprised of several factors, such as parent-child relationship quality and parental involvement.

5. Parental involvement- The level to which participants remember their parents being involved in several aspects of their lives, such as their education and their personal lives.

6. Parent-child relationship quality - Concept comprised of many interactional factors, such as parental involvement and caring interactions, but is truly determined by the perception of the relationship by both parties.

7. Parental marital quality - the participants’ memories of the level of happiness in their parents’ marriage during the participants’ adolescent years.
8. Displayed affection - participants’ memories of how often their parents displayed affection for them during their adolescent years.

9. Caring conversations - participants’ memories of how often their parents spoke to them in a caring way during the participants’ adolescent years.

10. Homework help - the frequency participants’ remember receiving help with their homework from their parents, during the participants’ adolescent years.

11. Personal problem help - the frequency participants’ remember receiving help with a personal problem from their parents, during the participants’ adolescent years.

Assumptions

For this investigation, it was assumed that all participants answered the demographic and substance use questionnaires honestly. Further, it was assumed that the scores on the scales of the SASSI-3 were an accurate reflection of the participants’ actual substance use. Similarly, it was assumed that the participants’ parents’ marital status was mediated by other family dynamic variables, such as parent-child relationship.

Limitations

After a critique of the methods and design for this experiment several limitations should be mentioned. The sample was drawn from a mid-sized public university in Southern New Jersey and, therefore, may not be a representative sample of the national young adult population. Further, the gender make-up of the sample was not uniform. The total sample of 118 participants included 72 women, which is 61% of the sample. In addition, this experiment did not take into account socioeconomic status of the participants. The design for this study contained only one measure for substance use and, therefore, does not account for fluctuation of substance use or experimentation. Further,
actual measures of substance use were not taken. Therefore, there is a chance the measures of substance use were not completely accurate. Finally, this experiment did not assess other familial factors contributing to the use or nonuse of substances by participants, such as having an alcoholic or drug addict in their immediate family.

Summary

Chapter II includes a review of literature and research regarding theories of substance use, the effects of family dynamics on children, the link between parental involvement and substance use, and the accuracy of memories of emotionally charged events. Chapter III provides a detailed description of the design of this experiment. Chapter IV is an account of the results stemming from this experiment. Chapter V is comprised of the conclusions supported by the results. In addition, this chapter includes a discussion of the implications of the findings of this research, directions for future research, and possible alterations to the design of this study.
CHAPTER II: LITERATURE REVIEW

Introduction

A substantial amount of research has been done with the purpose of constructing a model for the development of substance use behavior. An examination of this research allows one to conceptualize drug and alcohol use from a multi-factorial perspective. Bry, McKeon, and Pandina (1982) and Labouvie and McGee (1986) both found that substance use cannot be predicted using a singular variable. In fact, both investigations concluded that the probability of substance use is a function of the number of risk factors present within an individual. Further, both Bry et al. (1982) and Labouvie and McGee (1986) demonstrated that the likelihood a person will use drugs or alcohol increases with the number of risk factors present. These findings beg the question of which variables are the most powerful within the risk factor array. Considerable research has been devoted to environmental influences; similarly, intraindividual characteristics have also been extensively researched. A comprehensive generalizable model of the factors that influence a person to use drugs or alcohol has yet to be developed, this research has yielded a wealth of insight into the paradigm. At this point in the research, it can be concluded that, while the combination of environmental and intraindividual factors leading to drug and alcohol use may have a degree of commonality, there is a great amount of variability and uniqueness from person to person.
Intraindividual Risk Factors for Substance Use

With the recognition and acceptance of the previously stated risk factor model, much of the subsequent research in the area of alcohol and drug use has focused on the identification of risk factors. For example, Newcomb, Chou, Bentler, and Huba (1988) investigated cognitive motivations for substance use in a sample of adolescents. Newcomb et al. (1988) found that males exhibited higher levels of cognitive motivation to use drugs or alcohol to enhance positive affect and creativity, or for social cohesion as compared with females. Further, it was found that older adolescents used substances to reduce negative affect, regardless of gender. Similarly, Stacy and Newcomb (1999) found social conformity to be a significant predictor of substance use in a sample of women. The thirteen year longitudinal study conducted by Stacy and Newcomb (1999) demonstrated that sensation seeking was also a significant predictor of substance use. Finally, they found that the extent of adolescent drug use was a significant predictor of adult poly-drug use.

Other research has extended the previously cited findings. For example, King and Chassin (2004) investigated whether parental alcoholism, quality of parenting during adolescence, and behavioral characteristics in children mediated drug use and drug use disorders in a sample of 365 children. King and Chassin (2004) found that parental alcoholism was related to traits in the children such as impulsivity, sensation seeking, aggressiveness, and psychoticism. In addition, it was found that the levels of these four personality traits were a better predictor of a young adult receiving a diagnosis of a substance use disorder than parental alcoholism, parental support or control.
Similarly, Trull, Waudby, and Sher (2004) investigated the link between personality traits and substance use disorders. In a sample of 395 young adults Trull et al. (2004) found that personality disorder symptoms predicted significant variability in substance use disorders. Specifically, they found that negative affectivity and disinhibition were strongly positively correlated with alcohol and drug disorders; while cluster B personality disorders were significantly related to increased rates of alcohol use disorders.

A related study conducted by Labouvie and McGee (1986) investigated the link between an individual’s personality and substance use. Labouvie and McGee (1986) recruited an initial sample of 882 adolescents by use of telephones calls from five counties in New Jersey. The sample was assembled over the course of two years. The participants recruited in the 1982 wave were either 12, 15, or 18 years of age. Participants found during the 1983 recruitment period were either 15, 18, or 21 years old. Each participant was assessed twice during the course of the experimental procedures, at three year intervals. The two waves of measurement included assessments of personality attributes. Further, self reported data regarding use of alcohol, marijuana, cigarettes, and cocaine were obtained. This data included estimates of frequency of use, quantities consumed, and level of use to feel better in the face of difficult circumstances. Labouvie and McGee (1986) found that male adolescents used alcohol and marijuana significantly more than female adolescents. Further, it was found that participants who fit into the heavy user condition did not limit themselves to a single drug category regardless of age. The examination of personality attributes revealed several significant findings. The analysis showed that participants in the heavy user condition exhibited significantly
higher scores on measures of autonomy, exhibitionism, impulsivity, and play; while exhibiting lower scores on attributes such as achievement, cognitive structure, and harm avoidance. This was the opposite of the profile found for light users/nonusers (Labouvie & McGee, 1986).

A later study conducted by Swaim, Oetting, Edwards, and Beauvais (1986) examined the link between emotional distress and adolescent drug use. Swaim et al. (1986) utilized a sample of 563 participants who were in the 11th and 12th grades. During the experimental procedures measures of drug use were taken. These measures consisted of assessments of relative use of 11 different types of drugs, times of use, and amount used. The dependent measure was an assessment of the number of participants’ friends who had used drugs. Swaim et al. (1986) found that anger and anxiety were significantly related to drug use; while the best predictor of adolescent drug use was found to be peer drug use.

A more recent study performed by Elkins, King, McGue, and Iacono (2006) also examined the link between personality traits and substance use disorders. Specifically, Elkins et al. (2006) examined whether the personality traits of negative emotionality and constraint predicted the timing and onset of alcohol, nicotine, and illicit drug use. To carry out this research, Elkins et al. (2006) recruited a sample of 569 female and 432 males twins, between the ages of 16 and 18, who had been taken to the Minnesota Twin Family Study by their parents. Interviews with the twins and their mothers were conducted to assess levels of substance use. Aspects of personality, specifically constraint and negative emotionality, were measured using the Multidimensional Personality Questionnaire. After the initial interview, diagnoses were made regarding the presence of
substance use disorders in the twins. These diagnoses were made by a team of graduate students and two clinical psychologists based on the criteria established by the DSM IV-TR. Participants were interviewed a second time three years after the initial diagnostic interview. The analysis of the data obtained through these procedures yielded several significant results. For example, constraint and negative emotionality were both associated with the development of nicotine, alcohol, and substances use disorders (Elkins et al., 2006). Yet, only constraint was found to impact the time of onset of disorders. Specifically, the less constraint a person exhibits leads to earlier onset (Elkins et al, 2006). Further, a higher rate of substance use disorders was found within men as compared with women (Elkins et al., 2006). Similarly, men were found to develop more severe alcohol use disorders in young adulthood (Elkins et al, 2006).

Gottfredson and Koper (1996) performed an investigation aimed at assessing racial differences in variables used to predict substance use. Their investigation yielded more similarities between groups than differences. Yet, Gottfredson and Koper (1996) found that some risk factors do have the ability to predict subsequent drug use. For example, social integration, self-esteem, and self-efficacy were found to have low predictive value (Gottfredson and Koper, 1996). In addition, Gottfredson and Koper (1996) found positive peer influences significantly decreased the rate of substance use in White adolescents, but had little to no effect on Black participants. Similarly, commitment to school and rebellious behavior were found to have the strongest predictive value for White participants, although these variables reached significance for all groups. It was found that male drug use could be predicted through measures of rebellious behavior while this was not the case for females (Gottfredson and Koper,
1996). Conversely, it was found that the extent to which a person is committed to their education was a significant predictor of drug use in women, but not men (Gottfredson and Koper, 1996).

Together these investigations demonstrate how factors within a person contribute to substance use. For example, rebellious behaviors and negative affect were shown to be significant. It is not a stretch to state that factors such as negative affect can arise or be enhanced in an individual by family dynamics. The following section will attempt to make the connection between social factors, such as parental marital quality, and substance use.

Social Influences and Substance Use

The exploration of the relationship between substance use disorders and the environment in which one lives has provided intriguing insights. For example, research has shown that substance use disorders runs in families (Chassin and Handley, 2006). This observation illustrates the interaction between family environment and intrapersonal factors.

Van der Vorst, Engels, Meeus, Dekovic, and Vermulst (2006) conducted a study that examined how adolescent alcohol use is affected by parenting constructs. Specifically, van der Vorst et al. (2006) investigated whether parental control of the child and parental attachment to the child predicts the age at which alcohol use begins in a child. To carry out this investigation van der Vorst et al. (2006) recruited 1358 11-14 year old children from five schools in the Netherlands. The participants were asked to complete questionnaires aimed at gathering data regarding parent-child attachment, parental monitoring and supervision of the child, and current levels of alcohol
consumption in the child. These measures were taken three times during the course of the experimental procedure; at the initial intake, six months after the initial measure, and twelve months after the second measure. Van der Vorst et al (2006) found that the boys in this sample were monitored significantly less than the girls. In addition, a negative correlation was found between alcohol use by the adolescents and attachment to the parent. Yet, it was found that parental attachment could not be used to predict subsequent alcohol use from measure to measure (van der Vorst et al., 2006). With regard to the parental control variable, a negative correlation was found between strict control and child alcohol use. Further, it was found that boys will drink less than girls when their parents highly monitor their behavior. Interestingly, psychological control of children was not significantly related to adolescent alcohol use in any of the three measurements (van der Vorst et al., 2006).

Another study performed by Pomery, Gibbons, Gerrard, Cleveland, Brody, and Willis (2005) investigated how parents, peers, and siblings contribute to substance use in a sample of 225 African American families. The families included in the sample contained a child in fifth grade, the target of the investigation, an older sibling who was less than three years older than the target and a parent living in the home. Participants were interviewed and assessed twice during the experimental procedures, assessments occurring two years apart. The assessments measured substance use by target participant, target’s willingness to use substances, level of substance use by the target’s friends, level of substance use by the sibling, the sibling’s willingness to use, parental substance use, and participants perceptions regarding their neighborhood’s problems. Pomery et al. (2005) found that siblings’ willingness to use substances predicted changes in the targets
substance use from the first measure to the second. Similarly, level of substance use by parents at the first measure was positively correlated with target use at the second measure. Further, a similar positive correlation was found between level of peer substance use at the first measure with target substance use at the second measure (Pomery et al., 2006). This analysis clearly demonstrates the influence familial and peer relationships have on the development of substance use in adolescents.

A related study conducted by Willis, Resko, Ainette, an Mendoza (2004) explored the influence on peer and parental support on adolescent substance use. Utilizing an ethnically diverse sample of 1,826 adolescents Willis et al. (2004) found an inverse relationship between parental support and participant substance use. Further, this investigation established that peer support for or against drinking was positively correlated with substance use.

Walden, McGue, Iacono, Burt, and Elkins (2004) also investigated the influence of peer deviance and parent-child relationship quality on substance use in a sample of 1,403 fourteen year old male and female twins from the Minnesota Twin Family Study. This longitudinal investigation measured levels of deviance within the peers of the twin pairs. These measures were obtained through reports taken from the twins and their teachers. Further, measures were taken of parent-child relationship quality (with mother and father if both were considered a rearing parent) and amount, frequency, and type of substances used by the participants. Walden et al. (2004) found a positive correlation between parent-child relationship problems and participant’s substance use and delinquency in both male and female twins. Similarly, a positive correlation was found between parent-child relationship problems and number of drugs used by age 14. After
comparing the data obtained from the twin pairs, it was concluded that there was no significant differences between the monozygotic and dizygotic twins. Therefore, it was concluded that the majority of the variance found within this experiment was due to environmental factors (Walden et al., 2004). Finally, no gender differences were found within any of the analyses.

Factors Directly Related to Family

Individual risk factors associated with substance use were addressed in the previous section. This portion of the literature review will discuss variables innate to the development of the family that influence a child’s psychosocial growth or development. This included family transitions, parental conflict, and parental involvement. People grow and develop in the context of their family relationships; and it is well established that the environment in which one grows up can have a significant impact. Considerable research has been devoted to investigating how family dynamic and life changes affect children. The dissolution of a marriage is one of the most significant life changes a child may experience. Further, divorce can facilitate numerous changes to family structure and dynamics. Therefore, it would stand to reason that a divorce could facilitate numerous problems within a child, across a plethora of social, emotional, cognitive, and behavioral factors.

Hetherington, Bridges, and Insabella (1998) concluded that there are five major factors that influence a child’s adjustment to a marital dissolution. The factors they found to influence child adjustment were individual vulnerabilities and temperament, family composition, stress, parental distress, and disrupted family processes (Hetherington et al., 1998). Amato (2001) conducted a meta-analysis comparing children from intact families
with those from divorced families on several measures of adjustment, including emotional, academic, behavioral, and psychological. Amato (2001) found children of divorce to score significantly lower on academic, well-being, and general achievement measures. Further, the analysis conducted by Amato (2001) found the effects of divorce to be felt more profoundly by boys and for older children, especially adolescents.

Other research has shown that divorce in and of itself does not directly effect a child’s adjustment. Rather, these studies suggest that other factors present in the family system or other variables intrinsic to the parents or child are more closely linked to child adjustment. For example, Clark-Stewart, Vandell, McCartney, Owen, and Booth (2000) found that the quality of the mother-child relationship significantly influenced a child’s psychosocial adjustment. In addition, Clark-Stewart et al. (2000) identified factors, such as mother’s income, education level, and depressive symptoms as factors that determine mother-child relationship quality. In this investigation, it was concluded that a divorced mothers’ level of education and income affected her amount of free time thereby limiting the quality of interactions between mother and child. Similarly, the presence and level of depressive symptoms within a divorced mother affected the relationship with her child by altering her ability and motivation to parent effectively.

Similar research conducted by Pett, Wampold, Turner, and Vaughn-Cole (1999) found the effects of divorce to be mediated by other factors. Using a sample of 99 divorced and 99 married lower-middle class families with preschool aged children, Pett et al. (1999) found parent-child relationships to be a significant factor influencing a child’s psychosocial development. Further, it was shown that paternal involvement in the child’s life was critical to socialization, regardless of family structure (Pett et al., 1999).
Together the findings of Pett et al. (1999) and Clark-Stewart et al. (2000) demonstrate the importance of parent-child relationships on a child’s adjustment. Both studies indicated that divorce can affect child adjustment by facilitating changes in the quality of parent-child relationships and dynamics.

As research established that the direct influence of familial factors on a child’s adjustment to a divorce, more recent investigations have tried to illuminate other factors that influence the outcome. Pruett, Williams, Insabella, and Little (2003) performed an investigation examining family indicators of child adjustment to divorce. Pruett et al. (2003) found a negative correlation between parents’ views of their former spouses with the amount of time the former spouses spent fighting. In addition, Pett et al. (2003) found that the amount of fighting between parents, i.e., the level of parental conflict, was a significant predictor of several other family dynamic variables. For example, they found that parental conflict predicted less paternal involvement and negative parent-child relationships.

A further study examined the connection between family structure changes associated with divorce, such as one parent’s relocation out of the home, and measures of child adjustment. Martinez, Jr. and Forgatch (2002) carried out this research by taking measures of academic, behavioral, and emotional outcomes in a sample of 238 divorced mothers and their sons. Further, they investigated whether parenting practices mediated the effects of family transitions. Results revealed a negative correlation between family transitions and the academic functioning and emotional adjustment of the children (Martinez, Jr. & Forgatch, 2002). In addition, Martinez, Jr. and Forgatch (2002) found a positive correlation between family transitions and acting out behaviors, such as
willingness to comply with their mother’s directives. Yet, Martinez, Jr. and Forgatch (2002) found that the associations between family transitions and child outcomes were mediated by parenting practices. Specifically, they found parenting practices to be the most powerful predictor of child adjustment. Further, parenting practices may have the ability to buffer a child from the negative effects of family transitions associated with divorce.

Similarly, Summers, Forhand, Armistead, and Tannenbaum (1998) examined the relationship between parental divorce during adolescence and young adult psychosocial adjustment. In addition, Summers et al. (1998) examined the roles three variables related to family dynamics played within the paradigm. Summers et al (1998) specifically wanted to see the effects of interparental conflict, maternal depressive symptoms, and parent-adolescent relationship quality. To carry out this research, Summers et al. (1998) recruited 119 divorced and 123 married Caucasian adults. Mother-son dyads were formed from the sample of participants. Measures of depressive symptoms in parent and son, levels of conflict between parent and child, and levels of conflict between the two parents were taken twice, once during adolescence and then again six years later during young adulthood. The data analysis revealed interesting results. Summers et al. (1998) found that the family process variables of parental depressive symptoms, interparental conflict, and parent-child relationship quality did not mediate or moderate the effects of divorce on young adults. The only other significant result reported by Summers et al. (1998) was that the parent-young adult relationship was a powerful predictor of young adult psychosocial adjustment, especially when the parent was the father.
Another study conducted by Cui, Conger, and Lorenz (2005) investigated whether changes in adolescent psychosocial adjustment would be predicted by changes in marital distress. Cui et al. (2005) recruited 451 adolescents and their parents who were also taking part in the Iowa Youth and Family Project. Measures of marital conflict and child affect, delinquency, substance use, anxiety, depression, and hostility were taken in 1989, 1990, 1991, 1992, and 1994. Measurements were taken two times during each year. Interviewers were sent to each family’s home for two hours at a time to observe family dynamics and have family members fill out questionnaires. Cui et al. (2005) found a significant positive correlation between marital distress and child maladjustment. A similar, positive correlation was found between child maladjustment and marital conflict. This study provides important context to understand the complex family system. It is an illustration of how family dynamics, such as marital distress and conflict, change over time and how it is these changes within the family system that influences a child’s adjustment.

Tucker, Friedman, Schwartz, Criqui, Tomlinson-Keasey, Wingard, and Martin (1997) conducted a longitudinal study assessing the effects of divorce on children. Tucker et al. (1997) employed the use of participants from the Terman Life Cycle Study (1921-1991) to compare trajectories of individuals’ outcomes growing up in intact or divorced families. Tucker et al. examined the causes of death of participants who passed away during the course of the study. Further, they assessed psychological health, educational attainment, and health behaviors. Tucker et al. (1997) found that both men and women whose parents divorced had significantly higher risk of mortality in adulthood. Further, it was found that men had a significantly higher risk of death due to
injury. Tucker et al. (1997) concluded that this finding was consistent with previous research finding that boys from divorced families to be at increased risk for impulsive, reckless, and antisocial behavior (Guidubaldi, Cleminshaw, Perry, & McLoughlin, 1983; Hetherington, Cox & Cox, 1985 as cited in Tucker et al., 1997). With regard to gender, Tucker et al. (1997) found that both men and women raised in divorced families were significantly more likely to experience a divorce in their own marriage and were also more likely to smoke cigarettes. After analyzing the results from this experiment Tucker et al. (1997) concluded that divorce per se was a secondary variable in determining child adjustment and that levels of conflict in the family system was the primary variable in influencing a child’s adjustment to divorce.

Summary

This experiment is aimed at establishing a link between the participants’ memories of the level of certain family dynamic variables during the participants’ adolescence years and substance use during their young adulthood. Another purpose of this investigation is to find a relationship between young adult substance use and parental involvement during the participants’ adolescent years. Research regarding parental conflict and involvement within the divorce paradigm has demonstrated that these family dynamic variables are a robust factor in determining a child’s adjustment, regardless of age, race, or gender. Further, these variables were found to have a more profound impact than the dissolution of the parents’ marriage per se. Similarly, research regarding drug use illustrated the complex patterns that lead to substance use. For example, the articles reviewing intraindividual factors revealed numerous cognitive and emotional states related to substance use. Several studies pointed to negative affectivity or psychological
distress as being significantly related to substance use, while other studies pointed to peer influences and a desire to be accepted by peers as a powerful factor. Other research investigating drug use has shown the influence of relationships within the family and in society as a whole. Together the research regarding substance use if nothing else illustrates the wide variability within the substance use risk paradigm. The research examining divorce and child outcomes consistently showed the power of parental involvement and parental conflict in effecting child adjustment or mediating other variables that effect adjustment. Yet, none of the research reviewed addressed the link between children's memories of parental conflict, parental involvement, and parent-child relationship quality during childhood and substance use during young adulthood. In fact, there appears to a dearth of literature that addresses this link. This fact makes the current investigation only more significant, in that much of clinical work focuses on perceptions based on memories.
CHAPTER III: DESIGN

Sample

Participants were recruited to take part in an Institutional Review Board (IRB) approved study examining the relationship between participants’ memories of the interactional patterns of their family during adolescence and substance use measures during young adulthood. All participants were recruited on the campus of a small public university in southern New Jersey. The sample consisted of a total of 118 participants (46 men and 72 women). One hundred and sixteen of the total 118 participants were undergraduate students; the remaining two were in their first year of graduate school. Of the 116 undergraduate participants 28 were freshmen, 18 sophomores, 39 juniors, and 31 seniors. All participants were between the ages of 18 and 25; the majority of students were in the age range of 18-21 years old, 77.1%. In addition, vast majority of the participants were raised in New Jersey. The majority of participants (42.4%) reported their families’ total yearly income to be between $66,000 and $90,000. Further, 11% of participants reported their families’ total yearly income to be between $20,000 and $40,000 a year. While 26.3% of the participants reported their yearly family income was between $41,000 and $65,000. Finally, 20.3% of participants reported their families’ total yearly income to be above $100,000.

Experimental data regarding the participants’ family dynamics was using a background questionnaire. The only independent variable within the experimental design separated participants’ based on their memory of if they believed their parents marriage
was in trouble, was comprised of two levels. The first believed their parents’ marriage was not in trouble for a substantial period and was made up of 60 participants. Conversely, the second condition was made up of participants who did believe their parents’ marriage was in trouble for a substantial period and contained 58 participants.

The rest of the items on the background questionnaire used to assess the participants’ memories of interpersonal family dynamics present during their adolescent years employed the use of a 3-point Likert scale. The first of these factors was the participants’ view of their parents’ marital quality. The Likert scale for this item had participants report whether they remembered their parents’ marriage as very happy, somewhat happy, or not very happy. For the four following factors assessing memories of family dynamics a 3-point Likert scale was used. The Likert scale addressed memories of how frequently specific types of interactions between the participants and their parents. Specifically, the Likert scale asked if the participants remembered these interactions to have taken place rarely, sometimes, or often. The first of these four factors was the participants’ memory of how often their parents helped them with their homework. The second of the four factors assessed how often the participants remembered their parents helping them with a personal problem. The third of these factors examined the participants’ memories of how often their parents talked to them in a caring way. The last of these four items asked participants to report how often they remember their parents showing affection for them.

The final experimental item on the background questionnaire assessed how the participants would describe their relationship with their parents, not very close, somewhat close, or very close, during their adolescent years. Similar to the previous items, this question employed the use of a 3-point Likert scale.
Materials

Data regarding the experimental factors were assessed through the use of a background questionnaire, designed by the experimenter. The items on the background questionnaire were used to gather data regarding the participants' memories of family dynamics during their adolescent years. The items on the background questionnaire used as part of the experimental analysis are found in the Appendix.

Further demographic data was collected such as age range, gender, grade level, current GPA, place of birth, number of siblings, place in birth order, gender of siblings, range of family total yearly income, parents' highest level of education, and parental martial status at the participants' 18th birthday. In addition, participants were asked if they or any member of their immediate family receive treatment for alcohol or drug addiction, and if their parents ever separated for a significant amount of time to reconcile at a later date. None of this data was used as part of the statistical analysis. They were included on the background questionnaire to hide the experimental items; limit confounds, and provides the characteristics of the sample.

The substance use measures were taken using the Adult SASSI-3. The SASSI-3 is a one page pencil and paper test that measures the probability that an individual has a substance use disorder. In addition, the Adult SASSI-3 provides information regarding the respondents’ level of acknowledgment of substance use, emotional pain, risk of legal problems, and focusing on others. The participants’ level of acknowledgement of having a substance use problem is assessed using the Face Valid Alcohol, Face Valid Other Drugs, Symptomology, Obvious Attributes, Subtle Attributes, and Defensiveness subscales. Participants’ emotional pain is indicated by scores on their Defensiveness
Subscales. The participants’ risk of criminal behavior was assessed by the Correctional subscale. Finally, the participants’ level of focusing on others was examined by the Family vs. Control Subjects subscale. The Adult SASSI-3 has been shown to have an overall empirical accuracy of 94% in identifying substance dependence.

Reliability/Validity

No pilot studies or empirical research was conducted to assess the reliability or validity of the background questionnaire. It was assumed that the background questionnaire was answered honestly by the participants.

The Adult SASSI-3 has been extensively researched with the purpose of establishing its reliability and validity. According to the Adult SASSI-3 manual, several statements can be made regarding the reliability and validity of the tool. First, it should be stated that the Adult SASSI-3 correctly identified 98% of individuals who were found to have a high probability of having a substance use disorder by the clinical threshold of the instrument; who, upon comprehensive clinical evaluation, met the diagnostic criteria for having a substance use disorder. This is referred to as the test’s positive predictive power. Further, it was found that the sensitivity for the Adult SASSI-3 is 94%. This means that 94% of people who actually have a substance use disorder will be positively and correctly identified by the test as having a high probability for a substance use disorder. Conversely, of the individuals whose test results are negative on the Adult SASSI-3, the probability of a clinical assessment confirming this finding is 80%. In addition, for those individuals who do not have a substance use disorder, there is a probability of 94% that the Adult SASSI-3 will not falsely identify these individuals as having a high probability of having a substance use disorder. Finally, the Adult SASSI-3
has a 6% rate of misidentifying individuals as either having or not having a substance use disorder.

Method

The experimental procedure employed in this investigation was fairly simple. Participants were recruited either during undergraduate psychology classes, with professor permission, at various points on campus, such as the library or student center, and through the university participant pool. Once informed consent was received, participants were asked to fill out both the background and Adult SASSI-3 questionnaires. The order of in which the questionnaires were presented was reversed for every other participant to help control for an order effect, therefore half the participants received the SASSI-3 to fill out first and the other half received the background questionnaire first. Once participants completed the questionnaires, they were given a debriefing statement explaining the full purpose of the investigation. Further, the debriefing statement included information for institutions on and off campus participants could contact if they believed they needed help with alcohol or drug abuse. When these procedures were completed, participants were compensated with class credit if they were recruited in a psychology class or a piece of candy if recruited on campus.

Experimental Factors, Independent, and Dependent Variables

Participants were separated into the single experimental condition based on their response to an item on the background questionnaire. This independent variable dealt with the participants’ recollections of whether their parents’ marriage was ever in trouble for a substantial period of time. Two experimental conditions were created, one for the participants who responded no and one for the participants who responded yes. The
remaining experimental items were used as factors to be correlated with scores on the SASSI-3 questionnaire. There are six other experimental items on the background questionnaire. Each item employed the use of a 3-point Likert scale to assess the way the participants remembered the quality, frequency, and type of interactions there were between themselves and their parents during their adolescent years. These items asked participants to report their memories regarding the overall closeness of the relationship between themselves and their parents. Other items asked about the frequency of the participant receiving help from their parents regarding schoolwork or personal problems. In addition, two items assessed the participants’ memories of the frequency their parents spoke to them in a caring way and how often their parents show affection for them. The final item asked for the participants’ recollections regarding their perception of the level of intimacy in their parents’ relationship during their adolescence.

Hypotheses

Based on the independent variable, it was hypothesized that participants’ who believed their parents’ marriage was in trouble for a substantial period of time would exhibit significantly higher scores the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Further, it was hypothesized that there would be significant negative correlations between parental marital quality during the participants’ adolescent years and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Next, it was hypothesized that there would be significant negative correlations between homework help and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Similarly, it was hypothesized there would be significant negative correlations
personal problem help and the participants' scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Further, it was hypothesized that there would be significant negative correlations between caring conversations and the participants' scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. In addition, it was hypothesized that there would be significant negative correlations between levels of displayed affection and the participants' scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Finally, it was hypothesized that there would be significant negative correlations between parent-child relationship quality and the participants' scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3.

Analysis of Data

All data was analyzed using the SPSS computer program for the Windows operating system. The alpha level for all statistical tests was .05. Based on the experimental design a correlational analysis will be conducted. Further, an independent sample t-test will be conducted to compare the mean scores between the two levels of the single independent variable. These tests will be one-tailed based on the directional hypotheses.

Summary

A diverse sample of university students recruited at the site of this investigation was gathered to take part in an experiment examining the relationship between their memories of family dynamics during adolescence and substance use during young adulthood. A total of 118 participants were recruited (46 men and 72 women), all the
participants were between the ages of 18 and 25 years old. The specific age of participants was not asked, based on the recommendation of the universities Institutional Review Board. This was done to help further conceal the identity of the participants due to the sensitive nature of the data being collected. Therefore, the background questionnaire asked participants to indicate where they fell in several age ranges. The sample was comprised of a diverse sample of participants according to grade level and family year income. Ethnic origin was not part of the experimental data. Therefore, participants were not asked to report their ethnicity.

All participants were required to complete two questionnaires. The first questionnaire gathered background information. Specifically, it asked the participants what age range they belonged to, gender, grade level, current GPA, place of birth, number of siblings, place in birth order, gender of siblings, what range their families’ total yearly income fell into, parents highest level of education, and parental martial status at the participants 18th birthday. In addition, participants were asked if they or any member of their immediate family receive treatment for alcohol or drug addiction, if their parents ever separated for a significant amount of time to reconcile at a later date, and if they attended a private or public high school. In addition, the experimental conditions were created based on the participants responses to several items on the background questionnaire. These items addressed the participants’ recollections or perceptions of several aspects or types of family dynamics during their adolescent years.

The substance use data was gathered using the Adult SASSI-3. This is a highly reliable and valid measure of the probability that an individual has a substance use disorder. The Adult SASSI-3 has an overall empirical accuracy of 93%.
Participants were recruited either in undergraduate psychology classes, at various sites on campus, such as the library or student center, or through the university participant pool. Once informed consent was obtained the participants were asked to fill out the background and SASSI-3 questionnaires. When the participants completed the questionnaires they were given a debriefing statement and then compensated for their time.

Based on the independent variable, it was hypothesized that participants’ who believed their parents’ marriage was in trouble for a substantial period of time would exhibit significantly higher scores the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Further, it was hypothesized that there would be significant negative correlations between parental marital quality during the participants’ adolescent years and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Next, it was hypothesized that there would be significant negative correlations between homework help and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Similarly, it was hypothesized there would be significant negative correlations personal problem help and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. Further, it was hypothesized that there would be significant negative correlations between caring conversations and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. In addition, it was hypothesized that there would be significant negative correlations between levels of displayed affection and the participants scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales
of the Adult SASSI-3. Finally, it was hypothesized that there would be significant negative correlations between parent-child relationship quality and the participants' scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3.
CHAPTER IV: RESULTS

Introduction

This investigation was conducted with the purpose of establishing a link between memories of patterns of family dynamics during adolescence and levels of substance use during young adulthood. Participants were asked to complete a background questionnaire that provided data regarding the participants' memories of the dynamics of their family during their adolescent years, such as parental involvement and parent-child relationship quality. Further, the participants were asked to fill out the Adult SASSI-3 questionnaire, which assessed their levels of substance use and substance use behaviors. This data was then analyzed with the hope of finding a significant difference on substance use between groups who recalled different types of family dynamics. In addition, correlational analyses were conducted trying to identify a relationship between memories of types or frequency of specific family dynamics and substance use.

Results

The alpha level for the following statistical tests is .05, two tailed. All p values are reported two-tailed. It was hypothesized that participants' who believed their parents' marriage was in trouble for a substantial period of time would exhibit significantly higher scores the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. With regard to this hypotheses the statistical analysis revealed one significant finding. A significant difference was found between the group that believed their parents' marriage was in trouble for a substantial period and the group that did not believe their
parents’ marriage to be in trouble for a substantial period on the Correctional scale of the Adult SASSI-3. Those participants in the group that believed their parent marriage was in trouble had a mean score of 5.76 ($SD = 2.87, N = 58$); this is significantly higher then the group who believed that their parents marriage was not in trouble for a substantial period ($M = 4.67, SD = 2.96, N = 60, t = -2.03, p = .044$). A summary of the descriptive statistics, $t$ scores, and confidence levels for the nonsignificant analyses can be found in Table 1.

The alpha level for the rest of the statistical tests is .05, one tailed. All $p$ values are reported on-tailed. It was hypothesized that there would be significant negative correlations between parental marital quality and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. The statistical analysis for these hypotheses revealed one significant finding. There was a significant negative correlations between parental marital quality ($M = 2.01, SD = .862$) and participants’ scores on the DEF scale ($M = 4.83, SD = 2.08, r = -.161, p = .041, N = 118$).

Next, it was hypothesized that there would be significant negative correlations between homework help and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. The statistical analysis of the hypotheses revealed three significant results. There was a significant negative correlation between homework help ($M = 2.11, SD = 7.60$) and the participants’ scores on the OAT scale of the Adult SASSI-3 ($M = 4.47, SD = 2.68, r = -.311, p < .001, N = 118$). In addition, a significant negative correlation was found between homework help ($M = 2.11, SD = 7.60$) and the participants’ scores on the SAT scale of the Adult SASSI-3.
Finally, a significant negative correlation was found between homework help ($M = 2.11, SD = 7.60$) and the participants’ scores on the COR scale of the Adult SASSI-3 ($M = 5.20, SD = 2.96$, $r = - .242, p = .004, N = 118$).

Similarly, it was hypothesized there would be significant negative correlations personal problem help and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. With regard to the analysis of the hypotheses several significant results were found. First, a significant negative correlation was found between levels of personal problem help ($M = 2.20, SD = .801$) and the participants’ scores on the FVA scale ($M = 6.48, SD = 5.23$, $r = -.183, p = .024, N = 118$). A second significant negative correlation was found between the participants’ scores on the SYM scale ($M = 3.63, SD = 2.26$) and levels of personal problem help, ($M = 2.20, SD = .801, r = -.280, p = .001, N = 118$). The third significant correlation was between the participants’ scores on OAT scale ($M = 4.47, SD = 2.68$) and levels of personal problem help ($M = 2.20, SD = .801, r = -.276, p = .001, N = 118$). Next, there was a significant negative correlation between the participants’ scores on the SAT scale ($M = 2.97, SD = 1.34$) and levels of personal problem help ($M = 2.20, SD = .801$, $r = -.217, p = .01, N = 118$). The fourth significant correlation was between levels of personal problem help ($M = 2.20, SD = .801$) and participants’ scores on the DEF scale ($M = 4.83, SD = 2.08$) of the Adult SASSI-3. The prediction that there would be a significant negative correlation between scores on the DEF scale and levels of personal problem was not found. Surprisingly, a positive correlation was found between these variables ($r = .174, p = .03, N = 118$). Further, the statistical analysis revealed a
significant negative correlation between the participants' scores on the SAM scale 
\((M = 5.79, \ SD = 2.03)\) of the Adult SASSI-3 and levels of personal problem help 
\((M = 2.20, \ SD = .801, \ r = -.157, \ p = .045, \ N = 118)\). Finally, a significant negative 
correlation was found levels of personal problem help \((M = 2.20, \ SD = .801)\) and scores 
on the COR scale of the SASSI-3 \((M = 5.20, \ SD = 2.96, \ r = -.173, \ p = .031, \ N = 118)\).

The statistical analyses of the hypotheses regarding the levels of caring 
conversations and the participants' scores on the FVA, FVOD, SYM, OAT, SAT, DEF, 
SAM, and COR scales of the Adult SASSI-3 revealed six significant correlations. The 
correlations between the levels of caring conversations and the participants' scores on the 
FVOD and SAT scales were not significant. As was predicted, a significant negative 
correlation between the levels of caring conversations \((M = 2.64, \ SD = .607)\) and the 
participants' scores on FVA scale was found \((M = 6.48, \ SD = 5.23, \ r = -.217, \ p = .009, \ N = 118)\). Next, there was a significant negative correlation between participants' scores 
on the SYM scale \((M = 3.64, \ SD = 2.26)\) of the Adult SASSI-3 and levels of caring 
conversations \((M = 2.64, \ SD = .607, \ r = -.171, \ p = .032, \ N = 118)\), confirming the 
hypothesis. Further, another hypothesis was confirmed by the significant negative 
correlation found between levels of caring conversations \((M = 2.64, \ SD = .607)\) and the 
participants' scores on OAT scale of the Adult SASSI-3 \((M = 4.47, \ SD = 2.68, \ r = -.242, \ p = .004, \ N = 118)\). Next, the hypothesis stating there would be a significant negative 
correlation between levels of caring conversations \((M = 2.64, \ SD = .607)\) and the 
participants' scores on the DEF scale, was not confirmed \((M = 4.83, \ SD = 2.08, \ r = .215, \ p = .01, \ N = 118)\). Again, this correlation was in the opposite direction then was 
predicted. In addition, a significant negative correlation was found between levels of
caring conversations \( (M = 2.64, SD = .607) \) and scores on the SAM scale of the Adult SASSI-3 \( (M = 5.79, SD = 2.03, r = -.152, p = .05, N = 118) \). Finally, a significant negative correlation was found between the participants’ scores on the COR scale \( (M = 5.20, SD = 2.96) \) of the Adult SASSI-3 and levels of caring conversations \( (M = 2.64, SD = .607, r = -.202, p = .014, N = 118) \).

In addition, it was hypothesized that there would be significant negative correlations between levels of displayed affection and the participants' scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. The statistical analysis revealed four significant results. The correlations between levels of displayed affection and the participants’ scores on the FVOD, SYM, DEF, and SAM were not significant. The significant negative correlation between levels of displayed affection \( (M = 2.69, SD = .577) \) and the participants’ scores on the FVA scale \( (M = 6.48, SD = 5.23, r = -.180, p = .026, N = 118) \) of the Adult SASSI-3, confirmed the previously stated hypothesis. A further hypothesis was corroborated by the significant negative correlation between levels of displayed affection \( (M = 2.69, SD = .577) \) and participant scores on the OAT scale of the Adult SASSI-3 \( (M = 4.47, SD = 2.68, r = -.165, p = .037, N = 118) \). Similarly, there was a significant negative correlation between levels of displayed affection \( (M = 2.69, SD = .577) \) and the participants’ scores on the SAT scale of the Adult SASSI-3 \( (M = 2.97, SD = 1.34, r = -.212, p = .01, N = 118) \), confirming the hypothesis. Finally, the hypothesis predicting a significant negative correlation between participant scores on the COR scale of the Adult SASSI-3 and levels of displayed affection was verified \( (M = 2.69, SD = .577, r = -.159, p = .043, N = 118) \).
Finally, it was hypothesized that there would be significant negative correlations between parent-child relationship quality and the participants’ scores on the FVA, FVOD, SYM, OAT, SAT, DEF, SAM, and COR scales of the Adult SASSI-3. All, except one, of the hypotheses were all substantiated. The prediction there would be a significant negative correlation between levels of parent-child relationship quality ($M = 2.45, SD = .711$) and the participants’ scores the DEF scale ($M = 4.83, SD = .208$) of the Adult SASSI-3 was not confirmed, but the relationship was significant ($r = .248, p = .003, N = 118$). Just in the opposite direction then predicted. The correlation between levels of parent-child relationship quality ($M = 2.45, SD = .711$) and the participants’ scores on the FVA scale was significant and in the predicted direction ($M = 6.48, SD = 5.23, r = -.224, p = .007, N = 118$). Similarly, there was a significant negative correlation between the FVOD scale ($M = 5.58, SD = 8.52$) of the Adult SASSI-3 and levels of parent-child relationship quality ($M = 2.45, SD = .711, r = -.172, p = .031, N = 118$), confirming the hypothesis. Further, the hypothesis that there would be a significant negative correlation between levels of parent-child relationship quality ($M = 2.45, SD = .711$) and the participants’ scores on the SYM scale of the Adult SASSI-3 was verified ($M = 3.63, SD = 2.26, r = -.259, p = .002, N = 118$). Next, the hypothesis predicting a significant negative correlation between the participants’ scores on the OAT scale ($M = 4.47, SD = 2.68$) of the Adult SASSI-3 and levels of parent-child relationship quality was confirmed ($M = 2.45, SD = .711, r = -.390, p < .01, N = 118$). The next hypothesis predicting a significant negative correlation between levels of parent-child relationship quality ($M = 2.45, SD = .711$) and the participants’ scores on the SAT scale of the Adult SASSI-3 was also substantiated ($M = 2.97, SD = 1.34, r = -.235, p = .005$,
The relationship between the participants' scores on the SAM scale \((M = 5.79, SD = 2.03)\) of the Adult SASSI-3 and levels of parent-child relationship quality was also significant and in the predicted direction \((M = 2.45, SD = .711, r = -.217, p = .009, N = 118)\). Finally the correlation between levels of parent-child relationship quality \((M = 2.45, SD = .711)\) and the participants' scores on the COR of the Adult SASSI-3 was significant and confirmed the hypothesis \((M = 5.20, SD = 2.96, r = -.284, p = .001, N = 118)\). A complete summary of all of the correlations, both significant and nonsignificant can be found in Table 2.

The statistical analysis of the data gleaned from the experimental procedures produced numerous significant results. Each significant statistic confirmed a hypothesis; expect those dealing with the DEF scale. There were significant correlations found between each family dynamic variable and at least one scale of the Adult SASSI-3. For example, there was a significant negative correlation between levels of homework help and the participants' scores on the OAT, SAT, and COR scales of the Adult SASSI-3. Further, as predicted there were significant negative correlations between the participants' scores on the FVA, SYM, OAT, SAT, SAM, and the COR scales of the Adult SASSI-3 and levels of personal problem help. Only the hypotheses regarding the FVOD and DEF scales were not supported. Interestingly the significant correlations between the participants' scores on the DEF and the participants' memories of the family dynamic variables during their adolescent years were in the opposite direction then were predicted. Yet, the hypothesis predicting a significant negative correlation between parental marital quality and the participants' scores on the DEF scale was confirmed. It is fascinating why only this correlation would be in the predicted direction and the rest the
significant correlations with the DEF scale were in the opposite direction. Together the hypotheses confirmed by the statistical analyses indicate that there is a consistent inverse relationship between the family dynamic variables and measures of substance use. The findings indicate that substance use scores rise when the level of the family dynamic variables fell.
CHAPTER V: DISCUSSION

The results of the statistical analyses provide a new aspect to the understanding of the substance use paradigm. The findings suggest actual measures of family dynamics as predictors of substance use may not be the best or only way to assess family dynamics. The findings of this study as a whole show that actual levels of family dynamics, such as parent-child relationship quality and parental involvement, may not be as robust a measure as is the child’s perceptions or experiences.

A comparison of group scores on the Adult SASSI-3 scales produced one significant result. The analysis showed that the group of participants that believed their parents’ marriage was in trouble for a substantial period had a significantly higher mean score on the COR scale of the Adult SASSI-3 as compared to the group of participants who believed their parents’ marriage was not in trouble for a substantial period. According to the Adult SASSI-3 manual, the COR scale is used to compare the responses of test respondents with individuals’ with a relatively extensive criminal history. Therefore, it may be concluded that higher scores on this scale indicate an elevated risk for criminality or anti-social behavior. It is difficult to draw overarching influences and conclusions that can be applied based on this finding. Further, due to the fact that this was the only significant result in a series of 8 \textit{t-tests} limits its scope. No other scale of the Adult SASSI-3 yielded significantly different mean scores between the two experimental groups. Based on all these factors, it has been concluded that this result likely indicates a
chance difference within the sample. Therefore, it has minimal value in terms of applicability or generalizability.

The next set of hypotheses dealt with the relationship between parental involvement and substance use. Parental involvement was assessed through the assessment of levels of personal problem help and homework help. With regard to the relationship between levels of homework help and the participants’ scores on the Adult SASSI-3 scales, three significant relationships were found, confirming the experimenter’s hypotheses. Significant negative correlations were found between the parental involvement variable of homework help and the participants’ scores on the OAT, SAT, and the COR scales of the Adult SASSI-3. Further, significant negative correlations were found between levels of personal problem help and the participants’ scores on the FVA, SYM, OAT, and the SAT scales of the Adult SASSI-3. According to the SASSI-3 manual, each of these scales indicates the extent to which clients are conscious of their behaviors or traits that are associated with substance misuse. Together these findings illustrate the importance and power of parental involvement variables in the substance use paradigm and are very consistent with the findings of Willis et al. (2004). These findings indicate that when perceived levels of parental involvement decreases the behaviors and characteristics measured by the SASSI-3 scales increases. Conversely, the reverse is true when perceived parental involvement increases substance misuse behavior decrease. This is exactly what was found by Pett et al. (1990). Further, Pett et al. (1999) concluded that paternal involvement in a child’s life was crucial for adjustment. The fact that seven out of a possible 16 correlations were significant is an indication of the relative strength of the parental involvement variable. It was concluded that these findings
indicate that the perception of parental involvement is crucial in preventing maladjustment in adolescence that later manifests itself in substance misuse behaviors during young adulthood. The counterintuitive finding regarding the DEF scale will be fully discussed later on in this section, because this was not an isolated result. A pattern of significant correlations were found involving the DEF scale in the opposite direction than expected.

The final set of hypotheses examined the relationship between substance use and parent-child relations. To carry out these analyses, three parent-child relationship variables were correlated with the participants' scores on the Adult SASSI-3 scales. Significant correlations were found between displayed affection and the participants' scores on FVA, OAT, SAT, SAM, DEF, and the COR scales of the Adult SASSI-3. Each of these results substantiated a hypothesis put forth by the experimenter, except for the correlation found between displayed affection and scores on the DEF scale. Together the FVA, OAT, SAM, and SAT scales illustrate the connection between children's recollections of their parents displaying affection for them and substance use. As mentioned previously, the significant relationship between the COR scale and displayed affection can be seen as an indicator of the importance displayed parental affection to general adolescent adjustment.

The next parent-child relationship quality variable, caring conversations, showed significant correlations with FVA, SYM, OAT, DEF, SAM, and COR scales of the Adult SASSI-3. The correlations between the caring conversations variable and the FVA, SYM, OAT, and SAM demonstrate the connection between the quality of parent child relationship patterns and substance misuse behaviors. Similar to the significant
relationship between the previous parent-child relationship variable and the COR scale, the relationship between the Correctional scale and this parent-child relationship variable again indicates the importance of parent-child relationship quality on general adjustment, not just substance use behaviors. Finally, another significant result was found involving the Defensiveness scale, again in the opposite direction then was predicted. As mentioned previously, the findings regarding the DEF scale will be discussed as a whole later on in this section.

The final variable asked the participants’ to rate their experience within the parent-child relationship during their adolescence based on their memories. A significant correlation was found between this variable and every scale on the Adult SASSI-3. Again the correlation with the DEF scale was significant, but in the opposite direction then hypothesized and will be discussed below. The other seven correlations all confirmed the experimenter’s hypotheses. This pattern of results is very similar to those found by van der Vorst et al. (2006). Specifically, they found a significant negative correlation between alcohol use and parental attachment during adolescence. Similarly, Walden et al. (2004) found a significant positive correlation between parent-child relationship problems and participant substance use. Further, these findings are congruent with the conclusions of Clark-Stewart et al. (2000) in that mother-child relationship quality was viewed to significantly influence a child’s psychosocial adjustment.

The fact that every SASSI-3 scale was significantly correlated to the participants’ reported relationship quality with their parents indicates that this is the most powerful factor in the paradigm. Further, it suggests that this factor most likely mediates most of the other variables found to be influential. In addition, it was concluded that this variable
may be the only predictive factor, in that low levels of parent-child relationship quality, as reported by children, may be used to predict substance use behaviors. Further, these findings reflect the fact that a child's perception or experiences of their relationship with their parents is as important as a predictor than the actual quality of the interactions as measured objectively.

The pattern of findings related to the DEF scale was extremely interesting, because it seemed counterintuitive. Yet, after an in depth examination of the SASSI-3 manual, these findings were able to be put into context. The SASSI-3 manual provides two ways in which to interpret scores on the DEF scale. The first is in regard to high scores on the DEF scale. According to the SASSI-3 manual, elevated scores on this scale indicates the participant is unable or unwilling to recognize their own faults and limitations. Further, elevated DEF scores indicate that the participant may be blaming external sources for their problems, rather then taking responsibility for their actions. These interpretations were used by this experimenter to predict the patterns of correlations with respect to this scale. The second method of interpretation pertained to scores on the DEF scale that are exceptionally low. When participants’ responses on the DEF scale are exceptionally low, it can be said they are endorsing negative self statements. Further, low scores on this scale indicate that the participants are highly self critical and therefore are experiencing emotional pain. It now can be concluded that this is the context in which the significant results involving the DEF scale should be interpreted. It was hypothesized that there would be negative correlations between the DEF scale and the family dynamics variables. Yet, only positive correlations were found. It was determined that low scores on the Defensiveness scale have clinical importance.
Knowing this, one can understand that low scores on the DEF scale and parent-child relationship quality is not counterintuitive and demonstrates that low parent-child relationship quality is logically related to low DEF scores; which indicates high levels of emotional pain. When one changes the wording and makes the connection between the family dynamics variables and emotional pain, one will see the inverse relationship that was predicted. Therefore, it was concluded incorrect hypotheses were created based on the experimenter’s lack of experience with the Adult SASSI-3.

A second pattern of results is worth discussion. The statistical analysis identified only one significant relationship between the family dynamic variables and the FVOD scale of the Adult SASSI-3, which was the least number of significant correlations found between the family dynamics variables and any scale of the Adult SASSI-3. The FVOD scale was significantly negatively correlated with parent-child relationship quality. Yet, the question remains, why were there not more significant relationships involving this scale? According to the SASSI-3 manual, the FVOD scale assesses substance abuse behaviors in a direct manner. The items on this scale examine the causes, consequences, and correlates of substance dependency. A review of the specific items on the FVOD scale demonstrated the directness of the questions. These items specifically ask about situations and amounts of drugs a person has used. Therefore, it was concluded that lack of results relative to this scale could be due to the participants’ fear of reporting their drug use. The experimenter made every attempt to convey to potential participants that their information was confidential. Yet, these assurances may not have been believed. Further, during the period of time when the experimenter was collecting data at the university, two undergraduate students were caught with a large amount of marijuana in their dorm.
room. This was a highly publicized event on campus and may have contributed to participants’ reluctance to report any level of drug use.

A second reason why the correlations between the FVOD scale and the family dynamics variables were not significant may have been discussed in the literature review. Gottfredson and Koper (1996) and Labouvie and McGee (1986) found a significant negative correlation between substance use and commitment to education/achievement in women. Seeing that 61% of the sample consisted of women and they were all college students, this may account for the pattern of results, and therefore, these results can be interpreted as congruent with previous research.

As a whole, the results of this study are very congruent with the research discussed in the review of literature. These findings extend the current state of research by showing that memories or perceptions of family dynamics are just as influential as the actual levels or patterns of family interaction. Further, these results are congruent with literature discussed previously in that parent-child relationship quality was found to be the most powerful variable in the paradigm and was concluded to mediate the other variables.

The findings of this study are certainly compelling and thought provoking. Yet, several limitations and criticisms need to be discussed. For example, there are several issues worth discussing regarding the sample. First, the sample is relatively small for a study only employing the use of surveys. Further, the sample was comprised of a large proportion of female participants (61%). Therefore, the results might have been heavily influenced by the data provided by the female participants, as discussed earlier. Further, the results of this study may be due to other gender related factors within the paradigm.
For example, as mentioned in the literature review Stacy and Newcomb (1999) found social conformity to be a significant predictor of substance use in women. Therefore, there is a possibility that the results of this investigation were influenced by the female participants reporting higher levels of substance use due to the college environment, where they are expected to drink and use drugs. In addition, the sample was derived exclusively of college students, and therefore is most likely not representative of the young adult population. Yet, because the results are so consistent with the research summarized in the review of literature, it can be concluded that the results are legitimate and not due to chance.

There are areas that should be scrutinized and reviewed prior to carrying out replication studies and studies extending this research. These areas deal with the background questionnaire and Adult SASSI-3. Despite the fact that the Adult SASSI-3 is a highly reliable and valid instrument, it is not a direct measure of current substance use. Therefore, it can be said that the scores on the scales of the Adult SASSI-3 do not accurately reflect actual measures of substance use. With regard to the background questionnaire, future studies may want to provide more response options on the Likert scale. Despite the fact that that data derived using these materials was statistically significant and congruent with past research changes to the materials may allow future investigations to tease out the more subtle factors of the paradigm.

With the above said, there are several directions for future research based on the results of this study. First, one could examine the similarities or differences between actual measures and memories of family dynamics. Similarly, research could be conducted examining the relationship between a person’s perceptions and beliefs about
themselves and the dynamics of their nuclear family. Further, it may be worthwhile to see if the perception of family dynamics is mediated by birth-order. Similarly, one could study whether there are significant differences in the perceptions of family dynamics between cultures. Gottfredson and Koper (1996) found peer relationships to be a power factor in the substance use paradigm. Therefore, another investigation could be conducted to see if the memories of peer relationships during adolescence are related to levels of substance use in young adulthood. As discussed earlier, Gottfredson and Koper (1996) found that commitment to education was found to be negatively correlated with substance use. Accordingly, this study could be replicated adding a measure of educational commitment to see how this variable fits into this relationship. Next, research examining the relationship between memories of family dynamics and other measures of adjustment could be conducted; and, one could also track the developmental path an individual follows in relation to their memories of their families’ patterns of interpersonal interactions during later periods of life. In addition, future research could examine the efficacy of treatment programs designed specifically to address the client’s perceptions of their family life. While working with a client who comes from a dysfunctional family system, it may be highly beneficial to address the dynamics of the system or the clients perception of such. Therapists, if unable to affect the family system itself may still find it effective to work on the client’s perceptions of their family life. Further, it should be investigated to see if the perceptual approach to addressing the dysfunction of the family system is more efficient than actual family therapy. Finally, further research could investigate the importance of other interpersonal relationships within the paradigm. Pomery et al. (2005) found a significant positive correlation between participants’ levels
of substance and their siblings levels of substance use. Based on that study, it may be worthwhile for future research to investigate the connection between memories of sibling relationship quality during adolescence and substance use in young adulthood.
REFERENCES


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APPENDIX A

Experimental Items and Instructions from the Background Questionnaire
For the following questions think back on your adolescent years, between the ages of 12 and 18 years old and circle the number on the scale that best represents your perceptions or memories:

1= Very Happy, 2= Somewhat Happy, 3= Not Very Happy

1. How would you describe your parents’ marriage? 1----------2----------3

1= No, 2= Yes

2. Did you think that your parents’ marriage was in trouble for a substantial period?
   1----------2

1= Rarely, 2= Sometimes, 3= Often

3. How often did one or both of your parents help you with your homework?
   (12-18 years old)
   1----------2----------3

4. How often did your one or both of your parents help you with a personal problem? (12-18)
   1----------2----------3

5. How often did one or both of your parents talk to you in a caring way (12-18 years old)?
   1----------2----------3

6. How often did one or both of your parents show affection for you(12-18 years old)?
   1----------2----------3

1= Not Very Close, 2= Somewhat Close, 3= Very Close
7. How would you have described your relationship with your parents (12-18 years old)?

1--------2--------3
Table 1

*Group Statistics for t-test Comparing SASSI-3 Scale Scores of Participants Who Believed Their Parents' Marriage was and was not In Trouble for a Substantial Period.*

<table>
<thead>
<tr>
<th>Marital Trouble</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
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<td>FAV No</td>
<td>60</td>
<td>5.78</td>
<td>4.57</td>
<td>-1.49</td>
<td>116</td>
<td>.140</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td>7.21</td>
<td>5.78</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FVOD No</td>
<td>60</td>
<td>4.68</td>
<td>8.33</td>
<td>-1.17</td>
<td>116</td>
<td>.244</td>
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<td></td>
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<td>6.52</td>
<td>8.69</td>
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<td></td>
<td></td>
</tr>
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<td>SYM No</td>
<td>60</td>
<td>3.35</td>
<td>2.37</td>
<td>-1.41</td>
<td>116</td>
<td>.163</td>
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<td></td>
<td>58</td>
<td>3.93</td>
<td>2.11</td>
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<td>OAT No</td>
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<td>4.05</td>
<td>2.84</td>
<td>-1.80</td>
<td>116</td>
<td>.081</td>
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<td>58</td>
<td>4.91</td>
<td>2.47</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SAT No</td>
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<td>2.80</td>
<td>1.27</td>
<td>-1.38</td>
<td>116</td>
<td>.172</td>
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<td></td>
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<td>3.14</td>
<td>1.39</td>
<td></td>
<td></td>
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<td>DEF No</td>
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<td>2.29</td>
<td>.986</td>
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<td>.326</td>
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<td>4.64</td>
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<tr>
<td>SAM No</td>
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<td>5.68</td>
<td>2.15</td>
<td>-.568</td>
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<td>.571</td>
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<td></td>
<td>58</td>
<td>5.90</td>
<td>1.91</td>
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<td></td>
<td></td>
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<tr>
<td>COR No</td>
<td>60</td>
<td>4.67</td>
<td>2.96</td>
<td>-2.03</td>
<td>116</td>
<td>.044</td>
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<td>5.76</td>
<td>2.87</td>
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Note. Equal variances were assumed for all analyses.
Table 2

*Intercorrelations between Family Dynamic Variables and Scores on the SASSI-3 Scales*

<table>
<thead>
<tr>
<th>Scales</th>
<th>PMQ</th>
<th>HKH</th>
<th>PPH</th>
<th>CC</th>
<th>DA</th>
<th>PCRQ</th>
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<tbody>
<tr>
<td>FVA</td>
<td>-0.056</td>
<td>-0.095</td>
<td>-0.183</td>
<td>-0.217</td>
<td>-0.063</td>
<td>-0.229</td>
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<tr>
<td>FVOD</td>
<td>-0.061</td>
<td>-0.117</td>
<td>-0.090</td>
<td>-0.075</td>
<td>-0.068</td>
<td>-0.172</td>
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<td>SYM</td>
<td>0.103</td>
<td>-0.101</td>
<td>-0.280</td>
<td>-0.171</td>
<td>-0.132</td>
<td>-0.259</td>
</tr>
<tr>
<td>OAT</td>
<td>0.102</td>
<td>-0.311</td>
<td>-0.276</td>
<td>-0.242</td>
<td>-0.165</td>
<td>-0.390</td>
</tr>
<tr>
<td>SAT</td>
<td>-0.111</td>
<td>-0.240</td>
<td>-0.217</td>
<td>-0.110</td>
<td>-0.212</td>
<td>-0.235</td>
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<tr>
<td>DEF</td>
<td>-0.161</td>
<td>0.174</td>
<td>0.174</td>
<td>0.215</td>
<td>0.141</td>
<td>0.248</td>
</tr>
<tr>
<td>SAM</td>
<td>-0.038</td>
<td>-0.151</td>
<td>-0.157</td>
<td>-0.152</td>
<td>-0.070</td>
<td>-0.217</td>
</tr>
<tr>
<td>COR</td>
<td>0.019</td>
<td>-0.242</td>
<td>-0.173</td>
<td>-0.202</td>
<td>-0.159</td>
<td>-0.284</td>
</tr>
</tbody>
</table>

Note. N for all correlations is 118.

* p < .05 ** p < .01

Parental Marital Quality (PMQ), Homework Help (HKH), Personal Problem Help (PPH), Caring Conversation (CC), Displayed Affection (DA), Parent-child Relationship Quality (PCRQ)