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How Substance Abuse Affects Sibling Relationships: A Qualitative Study

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By
Kellee Garney

In Partial Fulfillment of the Requirements
For the Degree of
Master of Science and
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How Substance Abuse Affects Sibling Relationships: A Qualitative Study

Kellee Garney

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Abstract

The purpose of this research was to gain an understanding of the sibling relationship when one sibling abuses drugs and/or alcohol. It was hypothesized that a sibling relationship with a substance-abusing sibling would have lower levels of closeness and trust than non-substance abusing sibling relationships. Nineteen young adults aged 19-47 were interviewed regarding their perceptions of the sibling relationship. Nine participants had a sibling they perceived as abusing drugs or alcohol, 1 participant was a substance abuser with a non-abusing sibling, and 9 participants had a non-substance abusing sibling. The sample was not randomly selected with participants recruited from Rochester Institute of Technology psychology, sociology, and social work classes and through acquaintances of the researcher. Siblings with a substance-abusing brother or sister were found to have more distant relationships, less trust toward his/her sibling, and poorer communication within the family. Both the participant and his/her sibling were found to change their behavior after the substance abuse began.
Introduction

Statement of the Problem

The author investigated what affect young-adult drug abuse (including alcohol) has on the sibling relationship. Specifically, does having a brother or sister whom uses drugs affect the relationship between them?

Importance of the Study

Sibling relationships are one of the longest lasting relationships a person will have in his/her lifetime. They also can be one of the first social supports a child has growing up. Sibling relationships are unique in that they can provide sources of support, comfort, companionship and antagonism (Teti, 1992). The study of sibling relationships is of particular importance in adolescence and young adulthood (Shortt & Gottman, 1997). While many siblings grow distant because of participation in different peer groups, many still retain a strong tie to their sibling. Shortt and Gottman (1997) found that young adult sibling relationships have more warmth and less conflict and rivalry possibly due to trying to express themselves and become more independent from their family. This search for an identity may also lead to substance use and abuse (Levine, 1985).

Substance abuse may occur as a way to diminish or reduce discomfort with themselves or their family and/or they may have peers who use drugs and introduce it to them.

The National Household Survey (1999) conducted by the U.S. Department of Health and Human Services and the Substance Abuse and Mental Health Administration (SAMHA) reported that 10.9 percent of youths, aged 12 to 17, currently use illicit drugs. Among young adults aged 18-25, 16.1% reported using illicit drugs in 1999. This figure is up from 1997 when 14.7% used illicit drugs. Thus, substance abuse is an important
and increasingly more common problem among adolescents and young adults. With so many of our nation’s young adults using drugs, more and more families are affected. While researchers have examined sibling effects of drug and alcohol use on the other sibling’s behavior, researchers have not examined how the relationship itself is effected.

Family systems theory proposes that when a child/adolescent in the family uses drugs all the relationships in the family are impacted in some way (Bank & Kahn, 1982; Brooks & Rice, 1997; Kaufman, 1981; Levine, 1985). Specifically, the theory states that siblings of users often either become enmeshed, disengaged, parentified, or very successful. The user is often considered the scapegoat of the family and takes on the entire system’s dysfunction. While this theory is important to our understanding of family dynamics, it does not tell us how the relationship is changed; rather it gives the roles people play in the family.

What happens when one of the persons in the sibling relationship starts using or abusing drugs? When this important social support is altered by drug use, how does this impact the relationship, and in turn the adolescent or young adult in the other half of the dyad?

Dunn, Slomkowski, and Beardsall (1994) found negative life events such as maternal illness, school problems or accidents and illnesses brought sibling relationships closer, with more friendly and affectionate behavior. However, Jenkins (1992) found that in families experiencing marital disharmony siblings had more conflict. Dunn et al. (1994) suggested that negative life events should be examined more closely. In particular, different categories of life events should be studied rather than global scores of life events. It is this author’s contention that substance abuse by a sibling is a negative
life event that will have an adverse effect on the sibling relationship because of the stress and strain such behaviors cause for everyone associated with the substance abuser.

In this qualitative study of young-adult sibling relationships the effect substance abuse had on sibling relationships was examined to find the difference in trust and closeness between sibling relationships with substance-abusing siblings versus non-substance abusing sibling. The author also examined the difference in the sibling relationship based on gender differences and birth order of the siblings.

**Order of Presentation**

The literature of family systems theory with regards to addiction is reviewed. Literature regarding typical sibling relationships and what effect having a sibling with a chronic illness, mental illness, HIV or substance-abusing sibling has on the relationship is then critiqued. The purpose and hypotheses of the following study will be described, followed by the methods that will be utilized and results, implications and limitations of the research.

**LITERATURE REVIEW**

*Family Relationships within the Family System*

Family relationships are an important aspect of every individual’s life. Almost everyone has a family and has experienced both negative and positive emotions and events regarding his/ her family members. When there is a substance abuser in the family, the relationships among individuals can be impacted either negatively or positively (Bank & Kahn, 1997; Brooks & Rice, 1997; Kaufman, 1981; Levine, 1985).
Sibling Relationships

**Family Systems Theory**

Brooks and Rice (1997) described the impact addiction has on the family in the book, *Families in Recovery*. According to family systems theory, whatever effects one person will effect all people within that system. When addiction occurs in the family, it is considered a family disease with each person in the family playing a role in the addiction. This addiction can leave its members feeling angry, sad and abandoned. Members can take on various roles within the system that may support the substance abuser and/or addiction. These roles are often maladaptive and unhealthy but they are used to help the individuals survive and maintain the system (Brooks & Rice, 1997).

This interaction of the roles to maintain the addiction has several consequences. First, trust becomes a lifelong issue for the members (Brooks & Rice, 1997). Children who grow up in a home with an addict as a parent often have impaired trust and do not know who to trust, or even how to trust their own feelings or intuitions. While Brooks and Rice (1997) discussed trust as an issue for children when a parent uses drugs the same could be extrapolated to apply to a sibling who use drugs. Trust may be impaired because the sibling may confide in the addicted sibling and have his/her secrets told, money could be borrowed and not repaid, feelings may be hurt, promises may be broken and support may falter. Second, anger and fear may develop in the members toward the addict and the family system (Brooks & Rice, 1997). The members may be angered that they have to take on a certain role and that they are in a family with so many problems. The members may develop guilt over their feelings of anger, which may impact their functioning. They may be afraid that other bad things may occur or even scared that
others will find out about the addiction. This shame about the family is often found in children of addicts (Brooks & Rice, 1997).

The roles each family member takes in the addicted family and the consequences of these roles are important to understand. However, not much experimental research has been done examining these roles. While Brooks and Rice (1997) discussed the family system in terms of when a parent is an addict Levine (1985) discussed the roles siblings may take when a sibling is a substance abuser. Levine (1985) described the possible interactional dynamics between adolescent siblings when one adolescent is a substance abuser. In the sibling dyad when one member abuses substances the other member may become enmeshed and become a co-addict. The enmeshed relationship may be caused by the parents’ over-involvement with each other, which causes the adolescents to turn to each other for nurturance and acceptance. Another interactional dynamic that may occur is that the non-substance abusing sibling becomes parentified thereby assuming the role of caretaker for the substance abusing sibling (Kaufman, 1981). Finally, the substance-abusing adolescent may assume the scapegoat position within the family and use drugs in order to avoid competing with the “successful” sibling (Levine, 1985).

While these aforementioned studies discussed theory, Bank and Kahn (1997, original publication 1982) attempted to describe the roles siblings take and their relationships to their siblings when there is a “disturbed” and a “well” sibling using case studies taken from clinical practice. They (1997) described how siblings are effected when one of the siblings is “disturbed” (mentally or physically) and when one is “well” (not sick). “Disturbed” can mean mental illness, chronic illnesses, HIV infection, and substance abuse. They suggested that a “well” sibling derived his/her own identity from
having a sibling that is disturbed or deviant and vice versa. In particular, they suggested that parents reinforce these roles of being “well” and “disturbed” by the way they interact with their children.

Most “well” siblings had to balance two different and contradicting identities. For example, a “well” sibling identifying with both the “disturbed” sibling and the parent(s) may act as a mediator between the sibling and parent(s). In the case study of Patrick, he tried to buffer the tensions in the family by talking with his sister about her substance abuse and reassuring his parents that everything would work out. His parents would often plead with him to talk with her because “she listens to you” and he would try to have his sister understand why his parents were upset. Patrick’s work as a mediator served the family’s function and created Patrick’s identity in the family as being the “competent and successful” sibling (Bank & Kahn, 1997). This case study is an example of Brooks and Rice (1997) and Levine’s (1985) description of family members taking the roles of hero (overachiever), enabler and parentified child.

Other sibling relationships may form so the “well” sibling completely dis-identifies with the disturbed sibling and aligns his/herself with the parents. Others’ create rigid boundaries and cut themselves off from their family and the conflict involved in the family either emotionally or by physically moving away. One such brother moved to a different country to get away from the responsibilities of having a brother who was mentally retarded, a brother with schizophrenia, and a mother with depression (Bank & Kahn, 1997). On occasion, a “well” sibling may become a rescuer of a sibling with a “disturbance” and take care of him/her for a period of time (Bank & Kahn, 1997). All of
these disturbed family relationships can create different outcomes for the sibling who does not have a mental, physical, or substance abuse problem.

Closeness of Typical Sibling Relationships

Before examining the literature on disturbed sibling relationships it is necessary to have an understanding of typical sibling relationships. Dunn et al. (1994) conducted a longitudinal study with 39 sibling pairs from early childhood to adolescence. They found that across the years individual differences between the siblings were stable and those relationships that were characterized as close continued to be seven years later (Dunn et al. 1994). Similarly, Brody, Stoneman and McCoy (1994) found that 69% of sibling relationships classified as harmonious in middle childhood were reclassified as harmonious four years later.

Dunn et al. (1994) also found that female-female relationships were closer than male-female relationships and children from lower socio-economic status typically had more negative or conflictual relationships. They also discovered that negative life events (such as illness, accidents) positively correlated with greater intimacy in the sibling relationship. However, examination of the types of negative life events is important. It is possible that when a substance-abusing sibling causes stress in the family system different level of affection may exist between them. Study of negative life events is particularly important since Jenkins (1992) found that marital discord between parents resulted in an increase in conflict in the sibling relationship.

Shortt and Gottman (1997) discovered in their research on young adult sibling relationships that family status variables such as gender, age, and spacing were not related to the degree of closeness in a relationship. They found that those sibling pairs
who characterized their relationship as close in young adulthood had more warmth with less conflict, rivalry, and power struggles. Family status variables, geographical distance or amount of contact between the siblings could not account for the degree of closeness in the sibling relationships. Those siblings who are still struggling with their status in the relationship tend to have more distant and less close relationships (Shortt & Gottman, 1997).

Closeness of Atypical Siblings Relationships

siblings

Other research has focused on the reactions children have to their chronically ill sibling. Bergmann and Wolfe (1971) used eight case studies from their clinical practice to highlight some of the reactions healthy children, ranging in age from four to adolescence, had toward their chronically ill siblings. Overall it was observed that younger children (ages 4 to 6) often used bodily means to express their feelings such as being hyperactive, drawing an ill sibling with distortions and punching others. For example, one healthy sister often moved her hands around and punched others because her older brother who had muscular dystrophy (MD) had started doing this when his muscle deterioration began. To stop herself from doing this, she sat on her hands. Her anxieties about developing MD and her identification with her older sick brother were thought to cause her hand movements. School aged children (6 to 12) identified with their ill sibling and often developed neurotic personality traits such as crying when someone else helped the sick sibling before she/he could and having disturbing dreams that led the child to think he/she caused the sick sibling to be ill. However, by the time children reach adolescence, they have developed better coping strategies and often have
unidentified with the ill sibling, establishing clear differences between themselves and the chronically ill sibling (Bergmann & Wolfe, 1971). Often the period of adolescence helps in this dis-identification by having the teenager become involved in activities outside the home (Bergmann & Wolfe). Thus, it is apparent that growing up in a home with a chronically ill sibling can cause stress, hysterical symptoms and neurotic personalities. However, the small sample size and considerable psychoanalytic influence on these observations and subjective interpretations may bias the interpretations and extrapolations that can be made from this research.

**Sibling Relationships**

_Siblings with Mental Illness_

Solomon and Draine (1995) found that when individuals lived with a family member who is mentally ill they felt more stress or more disadvantaged because they had an ill family member that needed their support and care. Having a family member who is mentally ill places much stress on all family members causing them to feel more burdened. Deal and MacLean’s (1995) study extended the finding of Bergmann and Wolf (1971) by using more objective measures and a slightly larger sample size. They sought to determine the impact siblings with mental illness have on sibling’s psychological adjustment and sibling relationships. Fifteen younger siblings of psychologically disturbed siblings and 15 younger siblings who did not have an older brother or sister with mentally illness were recruited for participation. The control sample was a sample of convenience. Using established psychological measures and an interview, the researchers sought to measure self-esteem, personal adjustment, depression, and the sibling relationship (Deal & MacLean, 1995).
Sibling Relationships

Similar to Bergmann and Wolf’s (1971) pilot study with children of chronic illness, Deal and MacLean (1995) found that participants who had a sibling that had been hospitalized for a psychotic disorder reported more internalizing behaviors or psychological distress such as withdrawal, anxiety, depression, somatic complaints, and social problems than siblings who did not have a disturbed sibling. However, in contrast to Bergmann and Wolfe’s findings that siblings identify with their ill sibling Deal and McLean found that children who had a sibling with mentally illness identified less with that sibling and thought more negatively of him/her. In particular, siblings of mentally ill brothers/ sisters described themselves as similar in physical appearance but were dissimilar in personality and conduct, which may have contributed to the siblings not identifying with the mentally ill sibling. Similarly, research conducted on heroin addicts and their non-addicted brothers found that 40% of non-addicted brothers mentioned personality differences for the reason why they did not use drugs and why their brothers did (Maddux & Desmond, 1984).

Deal and MacLean (1995) also found that the sibling of the brother or sister with a mental illness perceived his/her relationship as being less positive than those who did not have a sibling with mental illness. In particular, the healthy siblings felt that they received less parental support and attention from their parents when they had a brother or sister with a psychological disorder (Deal & MacLean, 1995). While Bergmann and Wolf (1971) did not examine these variables, a study on sibling relationships with an HIV infected sibling did, which will be discussed in further detail below.

While the siblings who suffered from mental illness in the Deal and MacLean (1995) study mostly experienced mood disorders, Slomkowski, Cohen, Brooks and Rice
Sibling Relationships 13

(1997) studied adolescents with antisocial disorders and comorbid disorders. Utilizing a larger, diverse, and representative sample (N= 698) and standardized measures, the researchers were more confident in their findings and generalizations. Their sample consisted of 698 adolescents who were grouped into treatment categories of having a sibling with either Oppositional Defiant Disorder (ODD) or Conduct Disorder (CD) or some other form of a mental illness that was not ODD or CD as the control group. The children who had ODD and CD also had comorbid presentations with alcohol abuse (19%), emotional disorders (25%), and attention deficit disorder (ADD) (19%). The control group consisted of individuals who had a sibling that had emotional disorders (43%), ADD (13%) and alcohol abuse (22%). The sibling relationship was assessed using a self-report measure designed specifically to measure qualities of relationships entitled the Sibling Relationship Questionnaire (SRQ) (Slomkowski, Cohen, & Brook, 1997).

It was found that siblings who had an antisocial brother or sister reported more negatively charged relationships with that sibling. Individuals who had an antisocial sibling had less warmth and closeness in their relationship, more negative interactions and more competition than adolescents who had a sibling with mental illness. However, sibling relationships that had a sibling with ODD or CD with a comorbid condition did not result in an increase of negative relationships for these siblings. Overall, siblings of adolescents with other psychological disorders had relatively normal relationships with their siblings (Slomkowski et al., 1997).

Slomkowski et al.’s (1997) finding that siblings with just emotional disorders, alcohol abuse or ADD have relatively normal relationships contradicts Deal and
MacLean’s (1995) finding that children who have a sibling with a mood disorder have less positive relationships. This may be due to the age differences among the individuals who participated. In Slomkowski et al.’s (1997) study the average age of the participants was 16.2 years old. The average age of the participants of Deal and MacLean’s study was 11.4 years old. As Bergmann and Wolfe (1971) found, younger children experience more psychological distress than adolescents who were better able to cope with the sibling with chronic illness. Thus, the coping abilities of the individuals and the opportunities to disengage from the sibling by participating in activities outside the family of origin may mediate the impact psychological illness or chronic illness has on the sibling relationship. Further research is needed to examine the effects of particular types of psychological disorders have on the sibling relationship across ages. Young adulthood has yet to be examined in the literature to assess the impact mental and chronic illnesses may have on the sibling relationship.

**Siblings with HIV**

While the above mentioned studies have discussed the effects on sibling relationships when there is a mentally ill or chronically ill sibling, Daniel (1998) examined the effects of having an HIV+ sibling has on the sibling relationship. Eighteen children with an HIV infected sibling and 18 children without an HIV infected or chronically ill sibling were recruited for participation. The mean age of the siblings of children with HIV was 12.5 year with the mean age of children without an infected sibling was 9.5 years. The Sibling Relationship Questionnaire (SRQ) was used to assess the qualities of the sibling relationship in terms of warmth/closeness, conflict, and rivalry.
It was found that siblings of children with HIV were more likely to have rivalrous feelings toward their sibling. In particular, the researcher felt that parents paid more attention to and had more concern for the sibling with HIV (Daniel, 1998). This finding is similar to Deal and MacLean’s (1995) finding that siblings of children with mood disorders felt that they received less parental support and attention. Both studies used children with similar ages, which provides stronger support to the finding that younger siblings experience more feelings of rivalry when there is a mentally ill or chronically ill sibling present. Further research is needed to examine this effect with different age groups such as adolescents and young adults.

The sibling relationships with HIV infected children did not differ from the control group of siblings without any chronic illnesses in terms of warmth, closeness or conflict (Daniel, 1998). This is an interesting finding and may be an artifact of the small sample size. Further research should investigate these variables again with a larger sample to see if the results hold up. However, children who have an HIV infected sibling exhibited less nurturing behavior and were generally less dominant over their infected siblings. The type of questions that were asked to define nurturing behavior may have contributed to this finding. For instance, doing extra chores around the house did not qualify as a nurturing behavior. These siblings may have been taking care of the household to free the parents to spend more time caring for the infected sibling. These non-infected siblings also held less status and power in the relationship when compared to the control group. This finding may be due to the sensitive nature of HIV infection with the possibility of death the sibling may hold back from exerting control and
exclusion from caregiving for the infected sibling resulting in less opportunity to exert dominance (Daniel, 1998).

**Sibling with Substance Abuse**

While there is a vast amount of research that has addressed whether having an older sibling that uses drugs increases the risk for a younger sibling to use, there has been very little research examining the sibling relationship itself when one sibling uses or abuses drugs. This may be due to the relatively recent (15 years) focus on sibling relationships. Also, since substance abuse as a field of study is relatively new, very few researchers have begun to link sibling relationships and substance abuse together. Thus, it has not begun to examine what impact substance abuse on the part of a sibling may have on the sibling relationship.

In a thorough review of the literature only one study was found examined whether sibling relationships were linked to substance use that (Hall, Henggeler, Ferrerira, and East, 1992). In this study, 37 female adolescents were recruited from the Positive Adolescent Life Skills project (PALS). These teenagers were at high-risk for developing substance abuse problems and/or were pregnant. Most came from one-parent, disadvantaged homes with low educational attainment by the parents and had an average age of 16.9 years. A mix of Hispanic (16), African-American (14), Caucasian (4), Asian (2), and American Indian (1) female adolescents were sampled (Hall, Henggeler, Ferriera, & East, 1992).

Using the Sibling Relationship Questionnaire (SRQ), the researchers sought to determine if substance abuse was linked to sibling relationships. It was found that when there was high sibling conflict and rivalry independent of other family relationships, the
adolescent was more likely to have used alcohol and marijuana for at least 1-year or had a life long history of drug use (Hall et al., 1992). Thus, those adolescents who used alcohol and marijuana for an extended period of time rated their sibling relationship as filled with more conflict and rivalry and the sibling relationship had more impact on whether the participants used drugs than other relationships within the family. It may be that these relationships are indeed filled with these emotions, however, it may also be a distorted view of the relationship caused by the drug use. These feelings of conflict and rivalry may result from viewing his/herself as different from his/her drug abusing sibling in terms of personality and behavioral conduct. As reported earlier, Maddux and Desmond’s (1984) found that 40% of non-substance abusing siblings reported to have different personalities and conduct than their drug-abusing siblings which dissuaded them from using heroin.

Unfortunately, Hall et al. (1992) did not determine the rate of drug use for the other sibling in the relationship, which may be an important variable to consider in light of family systems theory that suggests that siblings often are co-addicts or enablers of the drug use (Levine 1985; Kaufman, 1981). Hall et al. also did not utilize a control group therefore it is unknown if these conflictual relationships are normative for at-risk, economically impoverished adolescents in which the sibling relationship may already be strained due to their circumstances. It is also unknown what the sibling relationship was like before the drug use began. Further research needs to examine how non-using adolescents feel about their sibling relationship with the drug-using sibling in order to determine if the relationship is indeed filled with rivalry and conflict.
Summary and Critique of Atypical Sibling Relationships

Taken together, the studies indicate that having a sibling who is “atypical” may cause psychological distress and anxiety for the healthy sibling (Bergmann & Wolf, 1971; Deal & MacLean, 1995; Solomon & Drain, 1995). The qualities of the sibling relationships differed according to the age of the siblings, the particular illnesses the siblings had and the amount of identification that took place with the ill sibling. In particular, siblings who had an antisocial brother or sister experienced less positive and more negative relationships with a higher level of competition when compared to siblings with other psychological illnesses (Slomkowski et al., 1997). However, children who had siblings with HIV experienced more rivalry and had comparable levels of warmth, closeness, and conflict as those who had siblings that did not have chronic illnesses (Daniel, 1998). Heightened rivalry was also shown for school aged children who had a sibling with a mood disorder (Deal and MacLean, 1995) and for female adolescents who had used alcohol and marijuana for at least one year (Hall et al., 1992). Rivalry or competitiveness was found across all disorders and all ages for the empirically conducted research (Daniel, 1998; Deal & MacLean, 1998; Hall et al., 1992; Slomkowski et al., 1997).

However, discrepancies were found in the level of positive (warmth) in the relationship and the level of negative (or conflict) in the relationships. Deal and MacLean (1995) found that the sibling relationships of children with mood disorders were less positive than those without. In contrast, Slomkowski et al. (1997) found that siblings of children with psychological disorders other than ODD and CD were similar to normal relationships, but the sibling relationships of children with ODD and CD less
positive. Daniel (1998) found no difference between the warmth/closeness and conflict of sibling relationships when there was a sibling with HIV or without a sibling with chronic illness. Thus, further research is needed to determine what the effects of different pathologies may have on sibling relationships with a child without any pathology. These differences should also be examined in terms of the developmental stage of children and their ability to cope with the stresses of living with an individual who is atypical. As Bergmann and Wolfe (1971) pointed out, as children age, their coping strategies and the resources available to them improve. In addition, many children (63%) who have a sibling with a disability may wish to talk to someone about their experience and feelings (Bischoff & Tingstrom, 1991). Solomon and Draine (1995) support Bergmann and Wolfe's observation, citing that the more supportive assistance individuals receive and the more self-efficacy and mastery the individual holds the less subjective burden they experience living with a mentally ill adult. As individuals age, they may be better able to request and receive assistance and understand their own strengths and weaknesses when living with a mentally ill family member.

Purpose and Hypotheses

Family systems theory and research has set the groundwork to examine family relationships and specific subsystems within the family. The literature regarding sibling relationships when there is an atypical sibling begins to support the family systems theory and research by focusing on the subsystem of sibling relationships. Specifically, relationships in which there was a sibling with a mood disorder experienced more conflict and rivalry and lower levels of warmth (Deal & MacLean, 1995). Sibling
relationships of HIV infected siblings had similar levels of warmth/closeness and conflict and heightened levels of rivalry (Daniel, 1998).

The literature focusing on substance abuse and sibling relationships suggests that substance abuse by one sibling will negatively impact the sibling relationship. It was hypothesized that the sibling relationship would be less close and more distant with lower levels of trust in which the participant does not use drugs and the sibling does use drugs. For those relationships in which both the participant and the sibling do not use drugs it was hypothesized that higher levels of closeness and trust would characterize the sibling relationship. The third hypothesis was that family structural variables had no significant impact on the quality of the sibling relationship.

Method

Participants

Nineteen participants, ages 19-47, were recruited for participation from Rochester Institute of Technology psychology, sociology, and social work classes and by word-of-mouth among the researcher’s associates and acquaintances in Virginia. As shown in Appendix A, as an incentive to participate a raffle for a $100 gift certificate, regardless if participants completed the interview, was conducted after all data was collected. All (19) participants were currently enrolled in college or had a four-year college degree. Some (4) were working towards or had their Master’s degree. Among the participants who had a sibling they perceived as having a substance abuse problem, four were female and five were male, aged 19 to 47. Five of the sibling pairs had a younger sibling who was the substance abuser and four pairs had an older sibling as the substance abuser. Among the participants with a substance-abusing sibling, four were a mixed sex sibling dyad (F-M),
one was a Female-Female dyad and four were both male dyads. The mean age difference between the interviewed sibling and his/her substance-abusing sibling was 3.1 years (ranging from one to eight years) with eight Caucasian and one Hispanic participant.

One interview with a male substance abuser was conducted. He discussed his relationship with his younger sister and indicated he abused marijuana. However, this interview was omitted from further analysis because it was not pertinent to the hypothesizes.

Nine (all Caucasian) participants were also interviewed regarding their sibling who they perceived as non-abusing. Four females and five males were interviewed, aged 23 to 33. The sibling dyads were composed of two Female-Male siblings, three Female-Female siblings and five Male-Male siblings. The mean age difference between the interviewed sibling and their non-abusing sibling was 4.3 years (ranging from one to nine years), with five participants discussing their older sibling and four discussing their younger sibling. Since a sample of convenience was used, generalizations to other populations should be made with caution.

Seventeen out of the eighteen participants reported minimal self use of drugs or alcohol and most reported engaging in social drinking on the weekends or drinking alcohol with a meal. Most (eight out of nine) participants reported that their sibling’s used multiple drugs most commonly alcohol and marijuana (88.8%) followed by acid and other psychedelics (44.4%) and cocaine (33.3%). Other drugs reported included crack (11.1%), heroin, (11.1%), and prescription drugs in conjunction with alcohol (11.1%).
Design and Procedure

The researcher who is trained in counseling conducted the interviews over the phone or in person. Most (13) interviews were conducted via the phone due to geographical distance. However, six interviews were conducted in person. The interviews took approximately 15-30 minutes depending on the treatment condition, with control participants taking less time. The researcher, to gain insight into the sibling relationship, generated the open-ended interview questions and the results are qualitative in nature (See Appendix B for a complete listing of questions). Questions included in the interview asked the participants to describe their relationship with their sibling, describe the best and worst parts of their relationship, whether or not they trusted the sibling, and the degree to which the substance abuse impacted their family, friends and school. Questions also asked about the amount and duration of drug use, the communication within the family, and any factors that may have predicated the commencement or non-use of drugs.

Before beginning the interview, each participant signed a consent form that indicated he/she was over 18 years of age, knew he/she would be asked about his/her sibling relationship, and knew, if he/she chose to participate in the research study, that he/she could refuse to answer any question and/or could withdraw from the study at any time. The informed consent form indicated that all materials would be kept confidential and anonymous, with only the consent form having his/her name on it. All other information was coded to preserve anonymity and confidentiality. All participants signed the informed consent form or gave their consent via the phone (See Appendix C) and no one refused any part of the interview. At the conclusion of the interview, all the
participants were given information on how to contact the researcher if they had any further questions or concerns and were informed of when the raffle would take place (See Appendix D).

Results

Quality of Relationship

Eighty percent (80%) of the participants who had a younger substance-abusing sibling were still currently abusing drugs or alcohol at the time of the interview. Participants who had a substance-abusing sibling who was older reported that all (4 out of 4 or 100%) had stopped abusing drugs. One brother was in rehabilitation, two still used drugs recreationally, and one was deceased. Participants with older siblings as substance abusers appeared to have a closer relationship with their sibling (3 out of 4) whereas participants with younger siblings as substance abusers (4 out of 5) characterized their relationship as not close or distant or as one participant phrased it as “pseudo friends”. In all, four of the nine participants (44.4%) in substance abusing sibling relationships characterized the relationship as close compared to the control participants in which eight out of the nine or 88.8% characterized their relationship as close regardless of birth order or gender. As shown in Table 1, gender, whether same-sex sibling pairs or mixed sex sibling pairs, did not seem to influence the reporting of the relationship as close, supporting the hypothesis that gender would not impact the reporting of closeness.

Control participants reported they trusted their sibling (88.8%) more often than participants who had a substance-abusing sibling (22.2%). When it came to trusting others, it appears that both control participants and participants with substance abusing siblings generally trusted other people (See Table 2).
For descriptive purposes the next set of data was examined. However, it there are many confounds in this data such as a deceased sibling and extremely small sample sizes, limiting the results and generalizability of the data. It is intended to suggest future directions of research and is only qualitative in nature. Therefore, as shown in Table 3, it appears the time that the substance abuse ended had a greater impact on the reported quality of the relationship rather than the type of substances abused. For example, for those participants who reported that their sibling had stopped abusing drugs at the time of the interview (n=5), 60% reported a close relationship compared to 25% reporting a close relationship when his/her sibling continued to abuse substances at the time of the interview (n=4). Those participants who reported that his/her sibling had continued abusing drugs at the time of the interview (n=4) reported a distant relationship (75%) compared to 20% who had stopped abusing substances (n=5). Among the sibling relationships in which the sibling had abused “hard” drugs (defined as drugs other than marijuana and alcohol, n=3), all had stopped abusing hard drugs at the time of the interview, with one sibling deceased, and one relationship characterized as close and the other as distant. The abuse of “soft” drugs (n=6) did not impact the reported quality of the relationship, with three participants reporting a close relationship and three participants reporting a distant relationship. Of the substance abusers characterized as preferring softer drugs (n=6), four continued to abuse drugs and of those four substance abusing sibling relationships, three reported a distant relationship. However, two out of two of the substance abusers preferring soft drugs and who had stopped abusing substances at the time of the interview reported a close relationship. Thus, it appears that continued substance abuse at the time of the interview had greater impact on the reported
quality of the relationship rather than the type of drug abused but future research should continue to examine these issues with larger sample sizes.

**Quality of Communication**

Communication within the family was also assessed. It was found that participants with a typical sibling relationship reported that communication in their family was more open (66.6% of families), enabling them to discuss both important and unimportant information with their family with no consequences, compared to 33.3% of families where substance abuse occurred by the sibling. Among the control participants, of those that reported communication was closed or impaired in some way, other family stressors were prominent including sexual orientation issues and alcoholism within the family.

**Catalysts for Substance Abuse**

Among all (18) participants, parental behavior and modeling may have influenced whether or not a sibling abused or avoided using drugs and alcohol. Within the substance abusing sibling pairs, five out of nine participants reported parents who were alcoholics or used drugs. Other possible catalysts that were reported for why the substance-abusing sibling abused drugs and alcohol included losing a leg, peer influences, or incest/rape. Eight out of the nine participants from substance-abusing relationships indicated that they all avoided drugs but used alcohol in moderation, while one participant indicated that he was initially introduced to drugs by his older brother but later stopped using once he saw what it did to his brother.

Participants from typical sibling relationships also reported that parental modeling and involvement in their lives discouraged them from abusing drugs and alcohol. The
participants reported that their parents engaged in the following behaviors which the participants credit to them not getting involved in drug abuse: not using drugs themselves, disapproving of alcohol and not keeping it in the home, feeling trusted and supported in other endeavors. One participant indicated he and his sibling avoided drug use because his father was an alcoholic and they did not want to be like him. Other positive influences included peer avoidance of drugs and/or viewing the negative consequences of drug use by friends.

**Implications of the Substance Abuse for the Substance Abusing Sibling and Relationship**

Among the substance-abusing siblings, legal problems (including arrests and jail time) resulted for four out of nine siblings, two entered rehabilitation, and one was institutionalized at one point in time. Not a single participant claimed any influence on persuading the sibling's to stop abusing substances. Among the biggest fears of participants with substance abusing siblings was finding the sibling getting into bad situations including jail, dropping out of school, living on the street, screwing up their lives, finding them dead, or seeing them kill themselves in a car accident or overdose. They also feared finding drug paraphernalia around the house leading to disease transmission and theft of money and/or other items from them and others.

Participants from abusive relationships had several themes emerge as the most painful aspect of their relationship. These included watching a sister die (1 participant), knowing how the abuse affected their parents (4), seeing others hurt emotionally (2), feeling helpless (2), and feeling angry at the sibling and parents for not preventing the abuse (1). Four participants still had feelings of anger and helplessness years after the substance abuse ended compared to typical sibling relationships in which four did not
indicate any area of difficulty or pain in their relationship. Other typical relationship participants indicated that other issues within their family, such as large age differences between the siblings, hiding a sibling’s homosexuality from a parent and sibling rivalry, had caused disruption in forging a close relationship. However, these participants still indicated they currently felt close with their sibling.

Substance abusing sibling relationship participants indicated that their behaviors and their siblings’ behaviors changed when the sibling was abusing drugs. Substance abusing siblings were found to steal, lie, cheat, and become verbally abusive to siblings, parents and others, flunk out of school, lose jobs, run away or move out of the parental home. One participant indicated her sister sold her children’s Christmas gifts and the furniture in her home to raise money for drugs. While the substance abusing sibling engaged in these behaviors, the non-abusing counterpart tried to cope with it by covering for the sibling or going to the other extreme and telling their parents everything. Others tried to distance themselves.

On a scale of one to seven, where one equals not at all and seven equals very much, the participants reported the degree to which drug abuse caused problems at school, home, and with friends, the participant, and for the abusing sibling. On average, the drug abuse impacted the substance abusing sibling’s schooling a lot with a rating of 5.9. At home, the average level of disruption was 6, followed by 5.6 for the abusing sibling, 5.3 for the participant and 2.5 for the abusing siblings’ friends. The participant reported that most of their substance abusing sibling’s friends had little to no problem with the drug abuse because they themselves engaged in drug abuse.
Change in the Sibling Relationship over the Years

Typically (N=9)) the substance abuse began during adolescence. Before this time, participants indicated varying degrees of closeness including being playmates, sibling rivalry, or having an older protective brother. Once the substance abuse began, the relationship changed. Five relationships became more distant, including losing respect for their sibling (2), being unable to forgive their sibling (1), talking less frequently (1), and feeling regretful (1). What was more interesting is how the non-abusing siblings changed after the drug abuse began. They became more aware of drugs, were afraid of trying any drugs and became more close-minded about drug use and those who engaged in that activity. One participant became more vigilant in watching over her children while another became more aware of the warning signs of drug abuse for the adolescents he teaches. One participant indicated that he became closer with his parents. Some of the participants (4) indicated they felt bad for their parents and what they went through because of the substance abuse, while one was very angry at his parents for not doing anything to stop the abuse.

Compared to the substance abusing sibling relationship the typical sibling relationship dyads became closer over the years. Siblings went from being playmates, to distancing during the middle school years due to dissimilar interests to becoming closer as adults because of similar lifestyles and interests including having a job and starting a family. One relationship began as distant and continued to be distant as adults. Several (6) participants mentioned specifically that as they moved farther away geographically from their sibling they became closer to his/her.
Discussion

Overall, it was found that participants from substance abusing sibling relationships had more distant relationships with their sibling, trusted their sibling less, and had more communication problems within their family when compared to the non-abusing sibling relationships, which is similar to the theoretical findings of Kaufman (1981), Levine (1985) and Bank and Kahn (1997). Compared to the atypical sibling research addressed above, it appears that substance-abusing sibling relationships are similar to HIV, chronically ill, and other research on substance abusing relationships by causing more psychological distress and anxiety for the non-abusing participant (Bergmann & Wolfe, 1971; Daniel, 1998; Hall et al., 1992). However, because most of the research was done with children, comparable levels of warmth and rivalry cannot be estimated because they are in different life cycles of their relationship. The current findings are similar to siblings with antisocial brother or sisters (Slomkowski et al., 1997) in which the sibling relationship is characterized as less close. Since substance abuse is often characterized as an antisocial behavior this appears fitting.

The relationships may have been more distant because the non-substance abusing participant may have developed a coping mechanism to deal with his/her feelings of anger, fear, sadness, and hurt by distancing him/herself in order to preserve his/her emotional and mental well-being by not dealing with his/her thoughts on a daily basis. Behavior on the part of the non-substance abusing sibling and the substance abusing sibling changed dramatically as the substance use progressed to abuse and it negatively impacted their relationship creating a more distrustful and distant relationship. Thereby supporting the hypothesis that sibling relationships are negatively impacted creating less
closeness and trust. Due to a small sample size, it is not clear whether gender impacted the degree of closeness reported by the participants. Within this research, gender, age or age-spacing did not impact the degree of closeness reported by the participants in either the control group or the substance abusing relationship.

Families with poor communication patterns also had higher levels of substance abuse or family issues in their homes. The substance abusing sibling may have turned to drugs and alcohol as a result of having poor coping strategies including not having a person he/she could talk to regarding difficult times within his/her life. Often the substance-abusing sibling had a parental role model that engaged in alcohol abuse or had a negative life event such as losing a leg or experiencing incest/rape that precipitated his/her abuse of drugs. While these siblings engaged in substance abuse to cope with their life, the participants interviewed did not engage in any serious drug or alcohol use and in fact the sibling’s abuse of drugs inversely effected their own use and consumption of drugs. The non-abusing sibling avoided or used alcohol in moderation regardless of birth order. This is contrary to research on adolescent drug abuse which found a link between an older sibling’s use of drugs and younger sibling’s commencement of drug abuse (Brook, Whiteman, Gordon & Brook, 1990; Conger & Rueter, 1996; Needle, McCubbin, Wilson, Reineck, Lazar, & Mederer, 1986). Thus, it may be that during the adolescent years, siblings are more willing to try alcohol and drugs but it may not develop into a problem, and in fact watching a sibling become more deeply involved in drug use may arrest any further experimentation. Further research should examine why two people from the same family and same circumstances are attracted to drugs and alcohol and why others are not.
Limitations of the Study

There are several limitations to this study. First, the control group and the treatment group were not matched samples and were not randomly selected. While the researcher primarily interviewed young adults the participants were not matched on age or age spacing. In fact, the typical sibling dyad and substance-abusing dyad differed on both accounts. Thus, they may not be as similar as originally thought resulting in two different groups, limiting generalizability of the research. Also, this research focused on only young adults, thus generalizability of the findings to older or younger age groups may not be possible. This may be especially true after seeing how the relationships have changed through the years, going from playmates in elementary years, to sibling rivalry during middle school years, and then becoming closer as they became older even though geographical distance may have increased. In fact, several (6) participants mentioned specifically that as they moved farther away geographically they became closer with their sibling presumably because they did not have to interact on a daily basis.

Examining the quality of the relationship found that the type of drug abused (hard vs. soft) did not seem to make a difference in the degree of closeness. Rather, whether the sibling had stopped abusing drugs at the time of the interview appeared to have a greater impact on the reported quality of the relationship. However, due to the small sample sizes and other compounds such as a deceased sibling, caution in interpretation is strongly recommended with future research examining these factors independently with a larger sample size.

While this research suggests that having a sibling who abuses drugs has a weaker sibling relationship in regards to closeness, communication, and trust, it is not known
whether the relationship was weak before the substance abuse began or whether the substance abuse lead to the weaker relationship. The data indicates a trend of having a stable relationship as they were younger changing to a more distant relationship once the substance abuse began especially when compared to the control group.

**Implications for Intervention**

There are several implications of this research to the practice of school psychologists and counselors. Awareness of the feelings and fears siblings of substance abusers have enables school psychologists to work with the sibling on reducing his/her stress. The school psychologist can also provide additional social supports and coping strategies in order for his/her to be successful in school. Better coping strategies may prevent the non-using sibling from engaging in drug abuse as his/her brother or sister had. Small groups may be useful to utilize in working with adolescents who have siblings who abuse drugs so that they become aware that there are others going through the same issues.

Knowing how the relationship is effected may also help the school psychologist when working with the substance abuser. Helping the substance abuser realize that others are negatively impacted may help the adolescent break the addiction. Research has shown that involving a family member in treatment of the substance abuser has a better outcome than not involving a family member (Higgins, Budney, Bickel, & Badger, 1994). Thus it is important to know how the non-abuser and the relationship is impacted so these issues can be addressed before the introduction of the sibling into the substance abuse treatment in order for it to be most effective for both individuals.
References


RESEARCH PARTICIPANTS WANTED:

Topic: How does the Sibling Relationship change when there is one sibling abusing drugs or other substances?

Who?: Looking for non-drug abusing persons who have a substance abusing brother or sister (either in the past or present).

What?: A half-hour individual interview with the graduate student researcher. All responses will be kept CONFIDENTIAL and ANONYMOUS.

Why Participate?: To further the knowledge of practicing psychologists and other professionals about sibling relationships and how they are impacted when one sibling abuses drugs.

All participants will be entered into a raffle to win $100 gift certificate to the mall.

When?: In-person interviews for the weekend of Jan. 19-21, 2002 or a phone interview at any time.

Where?: At a neutral location that affords privacy and anonymity.

Contact: kgarney@hotmail.com
Appendix B- Sibling Drug Use and Relationship Questionnaire (Abusing Sibling)

Code Number: _______________  Ethnicity: _______________

**Interviewee**- sex: ___ age: ___ (now) at time of abuse ___
Do you use drugs, including alcohol? Yes or No
What? How often?

**Sibling**- sex ___ age: ___ (now) at time of abuse ___
Are they using/abusing now? Yes or No
How long ago did they stop abusing?
How long using?
What drugs do/ did they abuse?
Have they or are they currently receiving treatment? What?
At what age did the drug use go from occasional use to a problem for your sibling?
For you?

1. Describe your relationship with your sibling now. (Have they stopped abusing ___)

2. What is the **best** part of your relationship with your brother or sister (now)?

3. What is the **worst** part of your relationship with your brother or sister (now)?

4. **Prior** to your siblings drug abuse, what was the **best** part of your relationship?

5. **Prior** to your siblings drug abuse, what was the **worst** part of your relationship?

6. How, if at all, has your relationship **changed** since he/ she started abusing drugs?

7. What, if anything, has been most **painful** or **difficult** regarding your siblings drug abuse?

8. What **behaviors have changed** since your sibling started abusing drugs (for both you and your sibling)? For example, have you covered for them, did they lie to or steal from you? How did that make you feel?

9. What are some of your biggest **fears** in relation to your brother/ sisters’ abuse of drugs?

10. Has the substance abuse impacted your ability to **trust** this sibling or others?

11. Do you think you, your self has changed because of the drug abuse? How?

12. How would you characterize the communication within your family?
13. In your opinion, to what degree has your siblings' abuse of drugs caused problems in school?  [Scale of 1 to 7, 1= not at all, 7= very much] home? friends?

14. In your opinion, to what degree do you think your siblings’ substance abuse is a problem for you?  [Scale of 1 to 7, 1=not at all, 7=very much] for your family? for your sibling?

Sibling Drug Use and Relationship Questionnaire (Non-Abusing Siblings)

Code Number: ________________ Ethnicity:

Interviewee- sex: ___ age: ___ (now) at time of abuse____
Do you use drugs, including alcohol? Yes or No
What? How often?

Sibling- sex ___ age: ___ (now) at time of abuse _____
Do they use anything now? Yes or No
What drugs do/ did they use?

15. Describe your relationship with your sibling now.

16. What is the best part of your relationship with your brother or sister (now)?

17. What is the worst part of your relationship with your brother or sister (now)?

18. How, if at all, has your relationship changed over the years?

19. What, if anything, has been most painful or difficult regarding your siblings' relationship?

20. Can you trust this sibling?

21. How would you characterize the communication style in your family?

22. Is there anything you can think of that may have contributed to you and your sibling not getting involved in drugs?
Appendix C- Informed Consent Letter

The purpose of this interview is to gain a better understanding of what sibling relationships are like when there is one substance abusing person in the relationship. The research examines the impact of having a substance-abusing sibling on the quality of the siblings’ relationship. The interviewer will ask your perceptions regarding the relationship and your sibling and its impact on you. This interview may benefit you by helping you gain a better understanding of your relationship with your sibling and any changes that have occurred because of the substance abuse. This research can further the understanding of professionals so that they are better able to watch for and work with siblings who may have a substance abusing sibling and possible provide support to those who would like to partake in those services.

There is a possibility that during this interview you may experience emotional discomfort based on the questions asked about you and your family. If you experience any discomfort, please let the interviewer know and we can skip that question or discontinue the interview all together. Participation is completely voluntary and you can withdraw from the interview at anytime.

This interview will take approximately 30 minutes to complete and will be kept completely confidential. The interviewer would like to take notes during the interview so that she will have a better memory of all that was said during analysis. All data collected will be kept completely anonymous by coding the notes taken by the interviewer. This informed consent form will be the only piece of paper with your name on it and it will be kept separate from the collected data.

After all data collection your name will be entered into a raffle with a chance to win a $100 gift certificate to the mall regardless of fully completing the interview or not. You will be contacted by e-mail if you win.

Thank you for your time and cooperation! If you have any questions or concerns please feel free to contact me at 716-424-8561 or by e-mail kgarney@hotmail.com

I have been fully informed about the nature of this research and I understand that I have the right to choose not to participate in the proposed project without adverse effects. I understand that I have the right to withdraw consent for participation in this study at any time with no adverse effects. I am age 18 or older.

After fully reading and understanding the above statements, I agree to participate in this research study.

______________________________  __________________
Signature                                             Date

e-mail: (for purposes of the raffle only) ___________________________________
Appendix D- Debriefing Letter

Thank you for participating in the study on sibling relationships! If you have any questions or would like to know the findings of this study, please feel free to e-mail me at kgarney@hotmail.com. You will be contacted regarding the raffle prize via e-mail or phone after all the data is collected. Thank you again! Kellee Garney
### Table 1

Gender Composition of Sibling Dyads and Reported Quality of Sibling Relationship

<table>
<thead>
<tr>
<th>Quality of Relationship</th>
<th>Male-Male</th>
<th>Female-Female</th>
<th>Female-Male</th>
<th>Male-Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance Abusing Sibling Relationship (n=9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>2</td>
<td>N/A</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Distant</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Typical Sibling Relationship (n=9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Distant</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: The ordering of the dyads indicates the first gender was the participant, the second gender was the sibling discussed in the interview. N/A indicates that the sibling was unable to report the current level of closeness because the sibling was deceased.
Table 2

Percentage of Participants Able to Trust His/ Her Sibling and Others by the Type of Sibling Relationship (N=18)

<table>
<thead>
<tr>
<th>Type of Sibling Relationship</th>
<th>Trust Sibling</th>
<th>Trust Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance Abusing (n=9)</td>
<td>22.2% (2)</td>
<td>88.8% (8)</td>
</tr>
<tr>
<td>Typical Sibling Relationship (n=9)</td>
<td>88.8% (8)</td>
<td>100% (9)</td>
</tr>
</tbody>
</table>
Table 3

Percentage of Participants Characterizing the Sibling Relationships as Close or Distant Compared to Type of Drug Used by Substance Abusing Sibling (N=9) and if the Sibling had Stopped Abusing Substances at the Time of the Interview (N=9)

<table>
<thead>
<tr>
<th>Quality of Relationship</th>
<th>Soft Drugs (n=6)</th>
<th>Hard Drugs (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close</td>
<td>33.3% (3)</td>
<td>50% 11.1% (1)</td>
</tr>
<tr>
<td>Distant</td>
<td>33.3% (3)</td>
<td>50% 11.1% (1)</td>
</tr>
<tr>
<td>Not Applicable (Sibling Deceased)</td>
<td>0%</td>
<td>11.1% (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance Abuse at Time of Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopped Abusing (n=5)</td>
</tr>
<tr>
<td>Close</td>
</tr>
<tr>
<td>Distant</td>
</tr>
<tr>
<td>Not Applicable (Sibling Deceased)</td>
</tr>
</tbody>
</table>

Note: Percentages in bold indicate the percentage of participants of the individual categories (n). The percentages in regular print indicate the percentage of participants to the total (N size) number of participants from substance abusing sibling relationships.