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BIRTH ORDER AND PSYCHOLOGICAL POSITION OF ACADEMIC AND
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The University of Arizona

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BIRTH ORDER AND PSYCHOLOGICAL POSITION OF
ACADEMIC AND SUBSTANCE ABUSING WOMEN

by

Kristie Graham Weeks

A Thesis Submitted to the Faculty of the
DEPARTMENT OF COUNSELING AND GUIDANCE
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF ARTS
In the Graduate College
THE UNIVERSITY OF ARIZONA

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ACKNOWLEDGEMENTS

I would like to take this opportunity to acknowledge those, who throughout the writing of this manuscript consistently supported my efforts. To my major thesis advisor, Dr. Betty Newlon, who read the many drafts of this thesis and lent her unflagging encouragement to every stage of its development. To the other members of my committee, Dr. Phillip Lauver and Dr. Glen Nicholson, who each lent their unique and specialized knowledge. I owe a debt of gratitude also to Randy Jones, statistician, who spent numerous hours translating data into meaningful computer output and whose uniquely specialized knowledge eased the way through extensive material. I would like to thank my brother for his interest and support, and my father for always telling me that there was not anything I could not do. And last, but in no way least, to my husband, David, who sustained me through two difficult years, and without whose love and most able editorrial assistance this thesis would not have been possible.

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ABSTRACT

Birth order, perceived birth order and the subjective perception of sibling differences were examined in 60 women--30 women who were chemically dependent and 30 women who were academic achievers. Within the framework of Individual Psychology, it was hypothesized that women would regard themselves differently on various traits compared to the perception of that same trait in their siblings, and that chemically dependent women would view themselves somewhat differently from their siblings than would women who were academic achievers. Another objective of the study was to examine the interrelatedness of those perceptions to birth order and perceived birth order. Perceptions of self and siblings for both groups of women were examined using a semantic differential scale with Family Constellation attributes. The association of birth order and psychological position were studied descriptively. Chemically dependent women regarded themselves as significantly more "serious" and "sensitive" than their siblings, while academic women viewed themselves as more "intelligent" and "considerate."

CHAPTER 1

INTRODUCTION

Despite the substantial body of literature addressing alcoholism, research in the area has been almost wholly derived from the male experience. Eighteen years ago Curlee (1967) pointed out "...that studies on alcoholism tend either to ignore women entirely or simply assume that alcoholism is the same regardless of the sex of the sufferer" (p. 156). Almost two decades have elapsed since Curlee's statement, but the needed definitive studies concerning women and alcoholism have not appeared in the intervening years.

Recently, an extensive search of the literature by Sandmaier (1980), revealed that of the several hundred English-language studies on alcoholism conducted between 1929 and 1970, only 28 directly discussed women. In 1982, the Journal of Studies on Alcohol abstracted 49 articles examining women and alcohol-related issues; more than the sum total in existence between 1929 and 1970. The underrepresentation of women in clinical settings, where research is most frequently conducted, men's higher reported rates of problem drinking, in conjunction with a lack of interest in the alcohol problems of women on the part of

predominately male researchers have been cited as factors contributing to this dearth of research (Wilsnack, 1984).

A related area is that of multiple substance abuse among women. Women who are alcoholic use substances other than alcohol more often than men who are alcoholic according to Schuckit and Morrissey (1979) and Nellis (1980) among others. As Celentano, McQueen and Chee (1980) noted: "Alcoholism and drug abuse present similar problems in research, have similar populations at risk, and similar individual characteristics of users" (p. 383). Yet there has been little attention paid to these similarities. The scarcity of literature on substance abuse generally, and on female substance abuse specifically, can be partially assignable to the division of funding agencies which conduct research in the areas of drug and alcohol abuse, resulting in two discrete domains of research. The separation of drug and alcohol research has precluded combined research on drugs and alcohol from cutting across agency boundaries (Celentano & McQueen, 1984). Hence substance abuse, especially in the area of women, has remained essentially unaddressed.

Birth order as it relates to family constellation is one of the principle concepts of Adlerian theory, and has implications for the understanding of substance abuse.

Polydrug abuse among women is a complex phenomenon, the etiology of which is only partially understood. The principles of Individual Psychology, as formulated by Alfred Adler, contain insightful statements about birth order, alcoholism, and drug addiction (Ansbacher & Ansbacher, 1956). Despite the considerable research conducted in the area of birth order and its correlation with various behavioral and psychological attributes (Shulman & Mosak, 1977; Toman, 1969), no research exists in the field as to the correlation between birth order and female substance abuse.

Since an individual's perception of their position in the family is an important aspect underlying the individual's view of life, or life style, as described by Adler (Ansbacher & Ansbacher, 1956), birth order effects have frequently been examined as a method of comprehending the influences of early life experience. Adler premised that it was the individual's interpretation of their birth circumstances that was more important than sequential birth order (Ansbacher & Ansbacher, 1956). Mosak (Shulman & Mosak, 1977) has also argued that the person's unique view of their position and role should be studied, as well as their conclusions about them, rather than the ordinal position itself. Because women's early childhood experiences have a

long history of being associated with the etiology of their alcoholism and chemical dependency (Wall, 1937; Winokur & Clayton, 1978; Corrigan, 1980), empirical research is needed which better defines the relationship between a woman's subjective perception of her birth order and chemical addiction.

While antisocial behavior and academic achievement are two variables frequently examined as related to birth order, the research has not yielded consistent findings. As Neld, Ward and Edgar (1977) have remarked "...the source of inconsistent and often contradictory findings could have been due to methodological differences, differences in experimenter operational definitions of birth order, or empirically valid inconsistencies in the theory" (p. 51). Investigation of both these dependent variables together as correlates of birth order in the same design, could yield a better measure of birth order and perceived birth order (Neld, Ward & Edgar, 1977).

Purpose of the Study

The purpose of this study was to examine the relationship between chemically dependent women's perception of themselves and their siblings, as compared to academic women's view of themselves and their siblings. The

interrelatedness of these perceptions to birth order and psychological position were also studied.

Hypothesis

The hypothesis of this study was that women regard themselves differently on various traits compared with their perception of that same trait in their siblings, and that chemically dependent women view themselves as somewhat different from their siblings than women who strive for academic achievement. Specifically, the objectives of this study were: (1) to compare the relationship between perceived differences among traits of women who are chemically dependent as they view self and siblings; and (2) to examine differences in perceptions of self and siblings as they relate to chemical dependency and academic achievement in women, and the interrelatedness of those perceptions to birth order and psychological position.

Delimitations

Permission was obtained in May of 1985 to gather information from 30 women residing in chemical dependency treatment facilities in urban areas of Arizona. The data was collected from May 1985 through November 1985. Permission was also obtained and data gathered in May of 1985 on a sample of the same size from women attending graduate school

at a state university in the same area. Samples were matched for family size. The subjects rated themselves and their siblings on the perception of 12 traits using a Family Constellation semantic differential scale created for this study (Lohman, 1982). An instrument designed by Lohman (1982), to ascertain psychological position accompanied the semantic differential.

Limitations

The limitations of this study may have restricted generalizability and included:

1. Both samples varied in socio-economic class, but were not representative of women from low socio-economic levels, or women from different ethnic backgrounds.
2. Both samples varied in age, but were not representative of adolescent or elderly women.
3. Neither sample was randomly selected.

Definition of Terms

This section supplies definitions of terms utilized throughout the study. Especially important to this study was careful differentiation between birth order and psychological position.

Chemically dependent woman, for the purposes of this study, refers to any woman whose use of mood-altering, or

mind-altering drugs, licit or illicit, including beverage alcohol, has caused problems in major life areas, such as work, social and/or interpersonal relationships. Throughout this study the terms alcoholic woman, female drug addict, chemically dependent woman, female polydrug abuser and female substance abuser will be used synonymously.

Women who strive for academic achievement, in this study, were those women enrolled in a graduate level degree program.

Birth order is the objective, sequential position to which a person is born. The child born first in a family has the birth order of "first," the child born next has the birth order of "second" and the last born child has the birth order of "youngest," in families of three or more (Lohman, 1982; Shulman & Mosak, 1977).

Psychological position, also referred to as perceived or assumed position in this study, is the subjective birth order as perceived by the individual. Women could view themselves in any one of the following psychological positions: as the first or the one out in front of the others, as the second striving to get ahead, or as a squeezed middle child, as the baby, or youngest striving to out do one or more older children. In two-children families, women could view themselves in any of

these positions except the middle one. Women in families of three, or more than three children, could perceive themselves in any of the positions previously delineated (Lohman, 1982; Shulman & Mosak, 1977).

Summary

In the last decade research directly addressing women and their chemical dependency problems has received increased attention and concern, although a substantial void still encompasses what is known about the evolution of chemical dependency in women. Even though psychological birth position is only one of a myriad of possible factors potentially involved in the etiology of women's substance abuse problems, it is of increasing importance to further examine the differences between chemically dependent women's and non-addicted women's views of themselves in their families as a way of gaining insight into the developmental processes of drug and alcohol dependence.

CHAPTER 2

REVIEW OF THE LITERATURE

This review of literature investigates women's alcoholism and chemical dependency from both historical and topical perspectives. Research associating female alcoholism and chemical dependency with specific early life experiences and low self-esteem, in conjunction with studies which examine the relationship between birth order and alcoholism in women, will also be reviewed. An overview of Adlerian birth order theory, and a concise exploration of Adlerian addiction theory are included.

The inclusion of studies in this review does not suggest that they are well designed, but merely indicates the presence of a discussion of female alcoholism and/or drug abuse. Many of the studies reported suffer from inadequate or nonexistent control groups (Karpman, 1949; Kinsey, 1966) and poor or biased sampling procedures (Wood & Duffy, 1966). Although this data is noteworthy as a historical examination of alcoholic women, it would be fallacious to view it as anything but preliminary, and the limitations of such studies should be kept in mind.

Historical Perspective

An historical analysis of women's drinking practices, presents a record of how deeply rooted the stigma of the alcoholic women has been in Western society. Disapproval of women's drunkenness permeates the earliest of Western cultures, even though the picture has not consistently been negative (Sandmaier, 1980).

The ancient Greek myth of Bacchantes presents a terrifying image of female drunkness (Graves, 1959). Transformed by the power of wine into a state of drunken frenzy, Greek legend portrays the Bacchantic maidens making collective love to the half-man, half-goat god, Pan, and ultimately slaying their husbands (Graves, 1959). In Rome, fear of unbridled sexual activity and violence made drinking by women a serious crime until the second century B.C. Prior to this time, the mere odor of alcohol on a woman's breath was punishable by death (Cary, 1937).

These early portraits of female drunkenness, have provided the theoretical underpinnings for subsequent theories about women's alcoholism, and although public drunkenness no longer mandates the death penalty, the power of these ancient images prevails.

Early Theories of Women's Alcoholism

Traditionally, the literature on women alcoholics had done little to present an integrated description of the female alcoholic. Historically, research on women and alcoholism has provided the following findings: (1) women display more pathology and are more promiscuous than their male counterparts (Karpman, 1949), (2) women's alcohol problems are more individualized than men's (Lolli, 1956), (3) women's alcohol problems are directly related to a specific life event (Wall, 1937), (4) women begin drinking later in life and become uncontrolled drinkers more quickly than men (Lisansky, 1957), (5) there is a relationship between female physiological functioning and alcoholism (Blane, 1968), and (6) women alcoholics demonstrate lower self-esteem than their male counterparts (Kinsey, 1966). The early literature abounds with studies attempting to isolate explanatory variables and to define the female alcoholic personality. Rather than offering explanations about women's alcohol problems, traditional views of women and alcoholism reflect societal biases and suggest a relative lack of knowledge about gender. Perhaps what is more important than selecting a single theory of female alcoholism from the early studies, is that a number of researchers have associated alcoholism in women with a woman's early life

experiences, fear of inadequacy and low self-esteem (Kinsey, 1966; Wall, 1937; Wood & Duffy, 1966).

Current Theories

As studies on female alcoholism have proliferated, the concept that differing explanations were required for women has gained momentum. While Wall (1937) was perhaps the first to have observed that the onset of heavy drinking in women was related to a definite life situation, current theories continue to associate alcoholism in women with their early life experiences. Beckman (1975) in her discussion of women and alcoholism, concluded that "Alcoholism and heavy drinking in women appear more likely to be linked to psychological stress and a specific precipitating circumstantial situation" (p. 799).

One of the recurring themes in female alcoholism literature has been that women alcoholics were raised in families where a parent or sibling was alcoholic. Schuckit and Morrissey (1976) surveyed 28 studies reporting data about female alcoholics, and found an increased rate in the immediate relatives of alcoholic women. Of the women investigated, 50% had fathers or brothers who were alcoholic.

Familial Incidence of Alcoholism

Although generally, alcoholism occurs in the family histories of both male and female alcoholics to a larger extent than in the population at large (Goodwin, 1971), the incidence of alcoholism in the family histories of female alcoholics appears to be higher than that of their male counterparts.

Beckman (1975) reported that women who were alcoholic were more likely to have alcoholic parents than were alcoholic men. Cotton (1979), in a comprehensive survey of the literature, found that seven of the nine studies which included comparative sex data showed a considerably higher rate of alcohol problems in the families of female alcoholics. These findings were in agreement with Winokur and Clayton's (1978) family history studies which indicated that 28% of the 30 women they examined had fathers who were alcoholic. In a clinical study of 45 female alcoholics, Rathod and Thompson (1971) found that 51% of their subjects had alcoholic fathers. While significant attention has been given to the family history of alcoholics, those studies including women have not often addressed themselves to the heterogeneity of the female alcoholic population because of their use of small samples and their lack of appropriate female comparison groups.

Alcoholic Women's Early Life Experiences

Other studies have concluded that a sizeable percentage of women who are alcoholic perceived their mothers as cold and domineering, while viewing their fathers, who were frequently alcoholic, as more gentle and affectionate. In a study based on interviews with 69 alcoholic women, Wood and Duffy (1966) stated: "Practically all our patients described their mother as rigid, perfectionistic, emotionally distant, and unable to give love in the way the daughter needed it" (p. 341). Curlee's (1970), examination of 100 male and female alcoholics lends support to the previous findings, revealing that 43% of the women sampled versus 26% of the men had experienced some kind of early familial disruption, such as illness, death or absence of one or both parents.

Johnson's and Garzun's investigation (1978) echoes the results of previous studies by isolating two factors frequently recurring in women's alcoholism: the presence of an alcoholic father, and the higher incidence of alcoholism in the immediate families of alcoholic women. Johnson's and Garzun's study (1978) suggests that not only do women who become alcoholic grow up in families where their mothers were perceived as emotionally distant and their fathers as passive, but that female alcoholics were also saddled with

an inability to satisfy their mothers. Additionally, Johnson and Garzun (1978) discovered that women who developed alcoholism often grew up passive, and resentful, lacking in self-confidence, and feeling worthless and inadequate.

More recently, Corrigan (1980) compared 33 matched sister pairs--33 alcoholic women and their 33 non-alcoholic sisters--and concluded that alcoholic women experienced their parents differently than did their sisters. Of the 33 alcoholic women investigated, 48% recalled their early years as unhappy compared with only 12% of their sisters. Other findings of interest in Corrigan's study were that 61% of the women investigated had one or more relatives with a drinking problem, and that more of the alcoholic women used tranquilizers than their non-alcoholic sisters (Corrigan, 1980). Corrigan's (1980) study has made a significant contribution to further understanding the differences between alcoholic women and their non-alcoholic sisters. Although as Corrigan states: "The results must be interpreted with caution because of the smaller numbers interviewed and the retrospective nature of the data" (p. 129).

Comparing female alcoholics with a "normal" control group and a group of women with emotional problems not connected to alcohol abuse, Beckman (1980) examined the

family backgrounds of female alcoholics. Results of this study reconfirmed earlier research that alcoholic women had a more disrupted home life during childhood, as evidenced by (1) having at least one alcoholic parent, (2) having one or both parents missing from the home, or (3) being raised by foster parents. In addition to these hypothesized findings, alcoholic women scored lower than the treatment controls on the social desirability scale of the Bem Sex Role Inventory and had fewer close friends. In sum, there appears to be a greater incidence of early childhood deprivation in the families of female alcoholics than in those of males.

Alcoholic Women's Low Self-Esteem

In conjunction with examining women's early life experiences as they relate to alcoholism, researchers have also posited that one of the central features of female alcoholism has been low self-esteem coupled with a preoccupation with being inadequate and inept. Tamerin, Tolor and Harrington (1976) compared 20 female alcoholics to 20 male alcoholics revealing that 80% of the women characterized themselves in more self-deprecating terms than did their male counterparts. Differences were particularly pronounced on items relating to depression and guilt. As Tamerin et al. (1976) concluded, "It is noteworthy that although women stated that alcohol made them feel more

lively than men did they continued to describe themselves as more depressed and worthless" (p. 458).

Beckman's study on the self-esteem of women alcoholics (1978) compared 120 alcoholic women with a control group of "normal" women and one of women who were in treatment for psychiatric issues not related to alcohol or drug use. Using the Rosenberg Scale, Beckman (1978) found that female alcoholics evidenced much lower self-esteem than the normal controls, but did not differ significantly from the treatment controls.

Collecting retrospective data on 30 matched pairs of female alcoholics and their non-alcoholic biological sisters, Anderson (1981) examined the relationship between adult drinking and pre-alcoholic traits in women. The alcoholic women were more likely than their non-alcoholic sisters to describe themselves as full of self-doubt and moody. Specifically, Anderson's (1981) results indicated that the pre-alcoholic adolescent female appeared insecure, withdrawn, and self-indulgent.

Researchers investigating the association of low self-esteem in women have frequently concluded that women in general report lower levels of self-esteem than men (Cloward & Piven, 1979; Guttentag, Salasin & Belle, 1980). Nevertheless, Maccoby and Jacklin (1974) analyzed 30 studies

concerned with self-esteem which were undertaken between 1961 and 1973, concluding that males and females have equally positive (or negative) self-images and that there was no reliable evidence to assert that women have lower self-esteem than men. Given that such a difference remains to be conclusively demonstrated, there has been some evidence suggesting that the basis of self-esteem varies between the sexes.

Hence, Carlson (1970) investigated the locus of men's and women's self-esteem, by using an adjective check list to determine those qualities the subjects thought were descriptive of themselves. The adjectives used were considered by Carlson to assess either social or personal sources of self-evaluation. Adjectives determined to be personal were 'independent, practical and confident', those of a social nature were adjectives such as 'cooperative, friendly and dependable'. In a series of investigations, Carlson (1970) discovered that women, irrespective of age, generally described themselves in terms of social (interpersonal) adjectives, while men responded in units of individualistic adjectives. Carlson (1970) concluded that although the level of self-esteem may be assessed as being the same between sexes, the sources of self-evaluation were very different.

One hypothesis about the clinical differences in self-esteem observed between male and female alcoholics has been the prevailing stigma attached to women's alcoholism (Sandmaier, 1980). Thus, women who relied on feedback from their significant others as a measure of their self-worth, received negative images since their drinking had an immediate and inimical effect upon such relationships.

Throughout, the focus of this review has revolved around the two issues viewed as central to the etiology of alcoholism in women: discontinuity in their early family life and low self-esteem. Further evidence has suggested that alcoholic women also experienced their families differently and felt less accepted than non-alcoholic comparison groups. The importance of these findings has been emphasized by Corrigan (1980): "If psychosocial development is sufficient to account for alcoholism in the study of women, then their total life experience, beginning with early family relationships is a critical area" (p. 130).

Female Substance Abuse Theory

Historically, and contemporaneously women's patterns of drug abuse have differed markedly from men's. Research dating from pre-Civil War to the passage of the Harrison Act in 1914 indicates that female drug addicts outnumbered men two to one (Silverman, 1982). Patent medicines containing

opiates were a regular part of home remedies and many female drug addicts began taking them for relief of "female problems" rather than for escape or euphoria. In 1914 when the sale of over-the-counter opiates was declared illegal and they were removed from the market place, the number of female drug addicts gradually descended to its present level of about one-fifth of the total addict population (Richards, 1981). It is noteworthy, however, that even today men remain the primary users of illegal drugs and women of legally prescribed psychotropics and psychotherapeutics (Cooperstock, 1976).

Despite the prevalence of drug abuse by women in this country, there is much disagreement as to the proportion of women who are dependent on drugs and alcohol (Reed, 1985). While some research cites male to female ratios that vary from 1:1 to 10:1, the overall proportion of women in most clinical settings is consistently reported to be about 20% (NIDA, 1981). Nonetheless, a substantial gap exists between what is known about drug abuse and women and what is known about drug abuse and men.

Although studies of chemically dependent women have increased in the last decade, a great deal of research has continued to examine gender only as a background variable upon which comparisons can be made, and has yet to go beyond

reporting simply that the sexes differ in terms of rate and pattern of use (Suffet & Brotman, 1976). Many of the available studies, like their counterparts in the early female alcoholism literature, present numerous methodological problems such as poor study designs, different or unclear definitions, and lack of appropriate comparison groups (Braiker, 1982; Kalant, 1980). These problems have frequently been magnified by small sample sizes.

Studies addressing women and their use of drugs other than alcohol or in combination with alcohol, have one common finding; women use psychotropic drugs in a ratio of two to one in comparison with men (Cooperstock, 1978). As Marsh, Colten and Tucker (1982) have observed: "The use of alcohol, psychotherapeutic drugs and heroin have traditionally been studied separately. However, users of any one substance frequently use at least one other" (p. 2). Though unique sets of concerns are related to the use of each substance individually, a number of common themes are apparent and bear a striking resemblance to those appearing in women's alcoholism research--early childhood disruption and low self-esteem.

Early Life Experiences of the Drug Abuser

Seldin's (1972) review of the literature on the family of the addict has characterized it as being an "unstable environment for emotional growth" (p. 99). Highlights of the literature on the family background of drug addicts have indicated that the critical role in the drug addict's family was played by the mother, as the fathers were often uninvolved and distant. This relationship with the mother appears pivotal since she has been depicted as emotionally immature, and ambivalent about her own role in the family (Seldin, 1972).

Analyzing a number of studies on the family setting of drug addicts, Aron (1975) found there to be considerable disorganization in the biological families of drug addicts. Additionally, Aron (1975) contrasted the family characteristics of 346 male and female drug addicts with the existing literature, reporting that nearly half of the sample under investigation came from broken homes. More precisely, 45% reported that one or both parents "drank too much" and 25% indicated the use of illegal drugs by members of their immediate family.

Though the above studies point to the concept that drug addicts' families have been marked by discontinuity and disorganization, Binion's (1980) descriptive comparison of

the families of drug addicted and non-addicted women drew opposing conclusions. According to Binion (1980), both addicted women and the comparison group described their mothers as "...helpful, and loving, but strict..." and "...remembered childhood and themselves with considerable positive effect..." (p. 2). In addition, subjects in the chemically dependent sample described themselves in childhood as being "...reasonably good, skilled and accepted by their peers..." (p. 3). Binion's (1980) research bridged an important gap in the substance abuse literature by focusing exclusively on the background characteristics of the families of female drug abusers and non-abusers.

A later investigation of the family dynamics of drug addicts by Binion (1982) revealed that "for women, drug use was more closely related to unresolved problems in the family, especially during adolescence" (p. 51). Specifically, Binion (1982) found that more women than men described their life growing up as unhappy (14.4% vs. 6%). Furthermore, when asked for perceptions of their parents on a semantical differential questionnaire, the men's descriptions were significantly more positive than the women's. Binion (1982), also established that although both women and men reported feeling wanted by their parents, women were significantly more likely to feel lonely and

unloved during their formative years. In sum, Binion's research identified drug addicted women as feeling more lonely and less loved during childhood, isolated from their peers, and having a sense of alienation from their families which they expressed behaviorally through their drug use.

Other investigators examining female substance abuse (Carroll, Malloy & Kendrick, 1980) have drawn similar conclusions. Thus, as the literature on chemically dependent women develops, the emerging picture is generally one of women whose early familial relationships were predominantly disruptive and unhappy. As for Binion's (1980) earlier study in which chemically dependent women's perceptions of their families were dramatically different from the bulk of the existing research, it is important to bear in mind that the early life experiences of women who abuse drugs are as heterogeneous as they are for women who do not abuse chemicals and that the literature of the last two decades abounds with failed attempts to delineate the typical female drug addict and to explicate definitive causal factors.

Self-Esteem of Female Substance Abusers

Even though women in general have reported lower self-esteem than men (Guttentag, Salasin & Bell, 1980), chemically dependent women continue to report much lower levels of self-esteem than their male counterparts, and also

lower self-esteem than non-drug dependent women when such a comparison group was utilized. Early research on the self-concepts of drug abusing women prompted Aldoory (1978) to make the following observation: "Women seek prescriptions for these drugs because they are lonely, anxious, dissatisfied, or unhappy, because they are not popular or thin or vigorous or beautiful as they have been led to believe they should be" (p. 34). Prior to Aldoory's comment, Dammann and Ousley (1976) concluded that women's more negative view of themselves might contribute to their psychotropic drug use.

Examining the differences in self and self-ideal of drug addicted males and females, on a semantic differential scale, Gossop (1976) concluded that women who were dependent on drugs described themselves in more negative terms than did males with drug dependencies. The 23 women examined scored significantly lower on the Evaluative factor than did the 32 male drug addicts.

A descriptive study of the self-perceptions of female substance abusers designed by Colten (1980) to determine those personality variables distinguishing women who abused drugs from those who did not, compared drug addicted women to women who were not drug abusers. The results of this study yielded a relatively cohesive pattern

of characteristics. Specifically, chemically dependent women scored lower in self-esteem and higher in anxiety and depression. Compared with the non-substance abusing sample, they also perceived themselves as having less control over their own lives. These results were not surprising since most of these attributes have been conjectured to be either consequences or causes of female drug addiction.

These results resemble those of Deren's and Koslowsky's (1977) study designed to examine personality differences in male and female drug addicts. Scores on the 16 Personality Factor questionnaire revealed female drug addicts to be more anxious and depressed than their male counterparts. An interesting facet of Deren's and Koslowsky's research was their comparison of addict profiles with the profiles of their non-drug abusing norm group. The results of the profile comparison indicated that neither male nor female drug addicts differed significantly from the mean norm group score by more than one standard deviation. These findings left Deren and Koslowsky (1977) to conclude that it may be more beneficial to study the personality strengths of drug addicts rather than their pathology.

Studying the similarities and differences in self-concepts of alcoholics and drug addicts as measured by the Tennessee Self-Concept Scale, Carroll et al. (1982),

found significant differences on seven of the 28 scales. While these seven scales were significantly different, the high significant intercorrelations, such as, Personal Self with Family, $r=.75$, of these scales could tend to have mitigated the differences. Furthermore, beyond confirming the general finding of low self-esteem among both alcoholic and drug addicted women, Carroll et al. (1982) revealed more similarities than differences between women who abuse drugs and alcoholic women in four of the diagnostic categories. The generalizability of this study was limited somewhat by the low socio-economic status of the women examined.

Rather than providing an exhaustive overview of the subject of female substance abuse, it has been the intention of this review to document the scope and complexity of issues related to drug abuse among women and to provide an historical, theoretical, and empirical context in which these issues could be better understood. As has been clearly illustrated, low levels of self-esteem in conjunction with disruptive early life experiences have frequently characterized chemically dependent women. Despite this evidence, no single factor has been found which has been consistently associated with drug dependence or alcoholism in women.

Birth Order Theory

Galton (1874) was perhaps the initial researcher to make use of the concept of birth order. Since that time a plethora of investigations in the field of birth order have occurred, 375 in the 1970s alone, according to Forer (1977). The first of the modern psychological theorists to examine the importance of birth position, Adler associated birth order with the development and dynamics of personality (Griffith & Powers, 1984). In Adler's schema, ordinal position was of secondary importance to the subjective perception and the family situation of the individual. "It is not the child's number which influences his character, but the situation into which he is born and the way in which he interprets it" (Ansbacher & Ansbacher, 1956, p. 377). According to Adler (1956), each person interacts with the world based on their own assumptions, with an individual's position in the family network clearly affecting the types of definitions which they developed and under which they operated. Adler's concept stressed that each child was born into a distinct family environment. Those children born first into a family occupied a different psychological situation than the later born children (Adler, 1964). Therefore, Individual Psychology discriminates between

psychological birth order position and ordinal position. As Adler (1980) commented:

The position of each child in the family still makes a great difference and each child will grow up in quite a new situation. We must insist again that the position is never the same for two children in a family, and each child will show in his style of life the results of his attempts to adapt himself to his own peculiar circumstances (p. 144).

From an Adlerian perspective, it is the individual's estimation of their circumstances that is the better clue to their personality than an objective interpretation of birth order.

Although studies on birth order abound, findings have often been contradictory and inconsistent. The general lack of consensus among studies prompted Schooler (1972) to state:

The general conclusion reached is that for people living in the U.S. in the middle 1960s there is almost no evidence of any birth order effects among men, and that these effects increase only marginally when restrictions on time, place and sex are removed (p. 161).

Other researchers, while not as vehemently opposed to birth order research as Schooler, have likewise declared birth order not worthy of future research efforts. Adams (1971) concluded that the only two consistent findings in the area of birth order have been the greater academic achievement of first borns and the increased tendency of

first borns to affiliate in anxiety producing situations. Warren (1966) has attributed the overrepresentation of first borns in colleges to the finding that first born children were more susceptible to social pressure than later borns. Schooler (1972) has ascribed the preponderance of first borns in academically elite samples to the fact that birth order prevalencies in the general population vary with population trends, hence birth order effects could be regarded as artifacts of those trends.

Despite contradictory findings, with claims of apathy at one pole and certainty at the other, interest in birth order as a research variable has persisted. Though the abundance of inconsistent results could be interpreted to mean that birth order has not been a tenable concept for the organization of human behavior, the diffuseness of articles on birth order has been a reflection of the importance Adlerians have assigned to the topic. Academic achievement and antisocial behavior are two variables which have received considerable attention in the birth order literature, with each yielding opposing results.

Birth Order and Academic Achievement

A number of studies conducted in recent years have indicated a significant relationship between the oldest child and academic achievement (Astin, 1969; Eckstein, 1978;

Sutton-Smith & Rosenberg, 1971). Regardless of the study examined, women born into the first position have been overrepresented. What these studies have left unaddressed, have been women born into various ordinal positions, but who regarded themselves as occupying another birth position. Melillo (1983) discussed this problem in her study designed to investigate the birth order and perceived birth order of academic women. Women (N=174) ranging in age from 20-68 responded to questions about their personal perception of their position in their family. The results of Melillo's investigation confirmed previous findings, that in a sample of academic women, first born women tend to predominate. It is noteworthy, however, that although 46.6% of the women sampled were first borns, over half, 53%, were not. Women occupying the youngest position comprised 21.8% of the sample, while women who were only children, and those born into the middle position constituted the remainder of the sample, 13.8% and 17% respectively. Responses to questions about their personal perceptions of birth order also led Melillo (1983) to conclude that "...there is no evidence to demonstrate that the perceived birth order of high achieving academic women is more important than their actual position" (p. 60).

Similar inconsistencies have appeared in research relating ordinal family position to antisocial behavior. Adler, as quoted by Ansbacher and Ansbacher (1956), said: "In my experience the greatest proportion of problem children are the oldest; and close behind the youngest" (p. 379). In an ostensible refutation of Adler's statement, Pepper (1976), related that in her experience the middle children were most often discouraged and engaged in misbehavior. Middle children, as Adler himself characterizes them, are frequently rebellious, but also better adjusted than oldest or only children. Toman's study (1969) found middle children underrepresented in child guidance clinics and in juvenile centers.

Even though the literature appears to proliferate with discrepancies as it pertains to birth order, academic achievement and antisocial behavior, Neld, Ward and Edgar (1977) found that when both of these dependent variables were examined together as correlates of birth order a more reliable measure of birth order was possible. Neld et al. (1977) examined 44 honor roll boys and 54 adjudicated juveniles ranging in age from 15-18 finding that the use of sequential interpretations of birth order produced inconsistent findings. The use of psychological descriptions of birth order yielded an overrepresentation of

psychological first born honor roll boys, and psychological middle borns in the adjudicated juvenile sample. The consistent findings of this investigation between both variables when psychological meanings were utilized, represents an important methodological contribution to birth order research.

Alcoholism and Birth Order

Adler viewed both alcoholism and drug addiction as representing a lack of social interest (1964). For Adler, social interest embodied the individual's capacity to develop a feeling of concern for others and an awareness of having a place in the human community (Adler, 1964). Thus, both alcoholism and drug addiction are viewed as antisocial behavior in the schema of Individual Psychology.

Several birth order studies have found a significant relationship between birth order and alcoholism (Blane, Barry & Barry, 1971; deLint, 1964). Studies of birth order utilizing samples of male alcoholics have generally indicated that there were more last than first born subjects (Barry, Barry & Blane, 1969). The few studies on female alcoholism and birth order have yielded ambiguous results.

In a study of 276 female alcoholics in Canada, deLint (1964b) found more last born than first born females. This difference did not exist, however (deLint, 1964a), when

the analysis was limited to samples of family units which had remained intact throughout the woman's childhood. In a later study, Blane, Blane and Barry (1971), using a sample which minimized the number of broken homes, found an overrepresentation of males who were last borns, but not females. This supports deLint's earlier findings, that in families remaining intact, the last born position is associated with alcoholism in men, but not women.

Blane and Barry (1973), in their study on birth order and alcoholism, combined all families with two or more children revealing once again the last born position to be overrepresented by male alcoholics, but not by females. Additional analyses have indicated that the predominance of males in the last position has not been dependent on family size, and has not been associated with any underrepresentation of an earlier birth position. Possible sources of bias such as faulty sampling or inaccurate reporting seem inadequate to explain why the last born position has consistently been reported to be associated with male, but not female, alcoholism. The "differential childhood experiences related to birth position and sex" has been offered as a reasonable explanation by Blane, Blane and Barry (1971, p. 660).

A review of the literature addressing the birth position of female alcoholics yielded a higher number of last born than first born subjects in 20 of the 27 articles under scrutiny, including five containing 200 or more subjects (Blane, Blane & Barry, 1977). "The difference from the null hypothesis that last born equal first born cases was statistically reliable in nine studies and no studies showed contradictory findings" (Barry & Blane, 1977, p. 62).

Further examination of studies concerned with the birth order of female alcoholics, indicated the predominance of the last born in only two of the six studies reviewed. In common with men though, last born women were more numerous in families of five to ten children. As Hare and Price (1969) have suggested this preponderance could be due to "birth-rate bias"--the overrepresentation in the general population of last born children from large families and first born children from small families.

An additional investigation conducted by Blane and Barry (1975) with 98 female alcoholics, found no relationship between birth order, family size and alcoholism. Despite the substantial evidence correlating the last position with alcoholism, Barry and Blane raise the fundamental point that birth order alone cannot be a causative factor in the development of alcoholism.

Individuals occupying certain birth positions are perhaps more susceptible to becoming alcoholic in response to the effects of certain experiences, rather than as a result of ordinal position alone. Therefore, it can be hypothesized, as Adler noted, that it is the interpretation made of birth circumstances rather than the actual order of birth that is important (Ansbacher & Ansbacher, 1956). As it relates to substance abuse among women, ordinal birth position may have little or no explanatory power, unless analyzed in terms of women's personal perceptions of their place in their family.

The importance of considering the individual's perception of their place in their family when conducting birth order research has been stressed by several authors (Bakan, 1949; Melillo, 1983; Shulman & Mosak, 1977). As the following statement indicates, Adler's (1956) own comments were explicit on this point: "It is a common fallacy to imagine children of the same family are formed in the same environment...the psychological situation of each child is individual and differs from that of others because of their order of succession" (p. 376).

Adlerian Addiction Theory

Adler's early writings, as compiled by Ansbacher and Ansbacher (1956), contain insightful references to his theoretical position on alcoholism and drug addiction. Adler

contended that drug and alcohol addiction were neurotic symptoms developed to safeguard the individual's self-esteem (1964). In discussing alcoholism and drug addiction, Adler (Ansbacher & Ansbacher, 1956) stated: "Very frequently the beginning of addiction shows an acute feeling of inferiority, marked by shyness, a liking for isolation, oversensitivity...and symptoms like anxiety and depression" (p. 423). These words portray the drug abuser as revealed in research by McAree, Steffenhagen and Zheutlin (1969) who found drug abusers to be withdrawn, aloof and having poor interpersonal relationships. Thus, within the framework of Individual Psychology, drug abuse has been regarded as a safeguarding mechanism, used by individuals to avoid life's responsibilities (Croake, 1981; Laskowitz, 1976; Steffenhagen, 1974).

Avoidance of responsibility and an underdeveloped social interest are characteristic of Adler's description of the pampered lifestyle. Individuals with a pampered lifestyle, as defined by Adler (Ansbacher & Ansbacher, 1956), never learned responsibility, or reliance on their own capabilities since others did for them what they could have done for themselves.

While there exists a paucity of empirical research reflecting the Adlerian viewpoint on drug addiction, several

investigators have critically examined drug addiction from an Adlerian perspective. Those researchers utilizing the Adlerian model in drug addiction research, have continued to associate the abuse of drugs and alcohol with diminished social interest and self-esteem safeguarding indicative of the pampered lifestyle (Steffenhagen, 1974).

Lombardi (1973) cited the individual's personal feelings of inferiority as the motivation for drug abuse. Lombardi's findings demonstrated how the drug addict's language has been representative of their low self-images. According to Lombardi (1973), drug abusers' terminology such as 'junk', 'dope', and 'fix', is descriptive of people who feel inadequate, and view themselves as needing to be "fixed." In this way, Lombardi (1973) noted how the language of drug addicts mirrored their lack of self-esteem.

Laskowitz (1976) has examined drug addiction in terms of the Adlerian concept of social interest, conjecturing that drug abuse is an individual's attempt to disassociate from society at large, since drug addiction provided a safeguard against feelings of inadequacy by temporarily alleviating feelings of inferiority. In Laskowitz's (1976) view, those who became dependent on drugs sought chemical relief as a way of escaping their despair at

being uable to achieve sexual, social or occupational success.

Steffenhagen (1974), investigated drug abuse from a self-esteem maintenance perspective in which the need to safeguard one's self-esteem was seen as the mechanism facilitating drug abuse. Self-esteem maintenance theory has claimed that all behavior is mediated by the individual's attempt to preserve their concept of self from perceived threats to their position in life. Thus, an individual's perceived inferiority causes withdrawal from participation in society and the development of compensatory maneuvers. Staffenhagen (1974) understood drug abuse to be such a strategy. Drug dependence serves as a self-esteem safeguarding mechanism because poor performance in life could be blamed on an outside factor--drugs.

Recently, Croake (1981) premised that adolescent drug addicts were pampered children who experienced frustration and defeat as they entered adolescence. Drugs offered an immediate escape from the harsh realities of life, and instantly increased feelings of self-worth. According to Croake (1981), "Pampered adolescents obtain a feeling of belonging without having to go through the slow step-by-step process that brings real success" (p. 20). Hence, drug addiction perpetuates the syndrome of the

pampered child by offering immediate gratification of their wants and desires.

Summary

Conclusions drawn by the aforementioned studies are based entirely on male samples, and while they are helpful in examining drug abuse from the vantage of Individual Psychology, generalization of these findings to female substance abusing populations would be fallacious. A search of the Individual Psychology literature did not reveal a single study addressing the topic of female substance abuse from an Adlerian perspective.

There has been general agreement in the alcoholism and drug abuse literature that substance abuse has become a major problem for women. The multifaceted nature of substance abuse with its physiological, psychological, and sociological components has not lent itself to the formation of a single theory as to why women become chemically dependent. Current research indicates that the combination of women's early family experiences in conjunction with low self-esteem may precipitate the abuse of alcohol and other drugs. Therefore, it appears that family structure and family dynamics play an important role in the female addiction process.

CHAPTER 3

METHODS

This chapter delineates the methods and procedures used in this investigation. Sample identification and selection, research design, and demographic data, are discussed first. A description of instrument development, data collection and analysis comprise the balance of the chapter.

The study was designed to determine if chemically dependent women's perception of themselves and their siblings differed from the view academic women have of themselves and their siblings. These perceptions were examined as they related to birth order and perceived birth order. Specifically, the hypothesis was that women who are chemically dependent perceived themselves as different from their siblings on a variety of traits, as compared to the perception academic women have of themselves and their siblings, on those same attributes. The objectives were as follows: (1) to compare the relationship between perceived differences among traits of both academic and chemically dependent women as they view self and siblings, and (2) to examine these differences in perceptions of self and siblings as they relate to birth order and psychological position of both chemically dependent and academic women.

Sample Selection and Research Design

Both inferential and descriptive procedures were utilized in this quasi-experimental design. Inferential techniques were employed to explore differences in self and sibling perceptions of both chemically dependent and academic women. Birth order and psychological positions were studied using descriptive methods.

Subjects

A sample of 30 chemically dependent women was selected by requesting volunteers from several inpatient substance abuse treatment agencies serving urban areas of Arizona. To be included in the study, all chemically dependent women had to have completed the detoxification phase of treatment. This possible pool included all substance abusing women entering treatment in the participating facilities during the recruitment phase of the study.

All female members of two graduate level courses in counseling were selected to comprise the academic sample. From these, 118 women completed questionnaires, resulting in 96 usable pieces of data. These questionnaires were then divided into family sizes ranging from two to six, in order to correspond with the family sizes of the chemically dependent sample. Academic women were selected at random from each family size, and matched according to family size

with women from the chemically dependent sample. As Schooler (1972) and other investigators, have suggested, birth order research can be strengthened by including family density data (Manaster, 1977; Shulman & Mosak, 1977).

Sample Identification

The chemically dependent women were chosen from three urban inpatient substance abuse treatment facilities in Arizona. Initially, seven agencies were considered for inclusion in the sample. Two facilities were eliminated because their patient census was too small. Another agency was determined to be unacceptable because it provided only outpatient services.

After the agencies had been identified, letters were mailed describing the study, and requesting permission to collect data on women currently in residence. A follow-up call was made to each facility within three working days after letters were posted.

In May of 1985, four substance abuse centers agreed to participation with one withdrawing at a later date. Concurrently, consent was also granted to gather information on women enrolled in a graduate degree program at a major university in the same area. In all, the sample included 30 chemically dependent women currently in treatment for substance abuse and 30 women enrolled in a graduate degree program in counseling. Family size for both groups ranged

from two to six with the largest number of women coming from three children families, N=24.

Demographic Variables

The variables described in this section were considered to be critical independent demographic characteristics. The conceptualization of each variable is discussed below.

Age

Age has been identified as an important background variable in many studies of alcoholics (Cahalan & Room, 1974). Considered an important background variable in this study, subjects were divided into two primary age groups, those under 30 and those over 30. Twelve of the chemically dependent women were under 30; with women over 30 comprising the remainder of the sample, N=18. Women in the academic sample were distributed as follows: N=9 in the under 30 group and N=21 in the over 30 group.

Socioeconomic Status

Socioeconomic status has often been neglected as a variable in studies of women and substance abuse. According to Corrigan (1980), previous indices have focused on men as the principle economic provider. Corrigan's guidelines for developing an index of socioeconomic status based on educational level and income (both source and amount) were

followed. The reluctance on the part of the majority, N=48, of women in both samples to designate the amount of their income negated subsequent comparisons.

Educational Level

All women in both samples provided information on educational level. In the chemically dependent sample, 23 women were high school graduates and seven had some college. By definition, the women in the academic sample had completed at least four years of college.

Race

Both groups of women were predominately Anglo. Only one of the 30 women in the clinical sample was black, and all of the 30 women selected at random from the academic sample were white.

Due to the underrepresentation of women in substance abuse settings, no attempt was made to control for the confounding effects of sex with birth order by choosing women from families with same-sex children (Lohman, 1982). Nor was any effort made to restrict the age spacing of the siblings. Age differences between siblings ranged from two to fourteen years. Adler (1964) stated that the effects of birth order are reduced "when the gap between siblings is great, and they are all the stronger the narrower the gap..." (p. 252). Similar results have been found by Miller and Zimbardo (1966).

Instruments

Two instruments were utilized throughout this study. A semantic differential containing 12 attributes commonly found on an Adlerian family constellation form was used to determine chemically dependent and academic women's perceptions of self and siblings. Psychological position of both samples was derived using a form designed by Lohman (1982) to ascertain individuals' perception of their place in their family.

The Semantic Differential with Family Constellation Terms

Lohman (1982), in her study designed to investigate perceived sibling differences, collected family constellation questionnaires from six notable Adlerians across the United States. After reviewing the six questionnaires, Lohman (1982) incorporated those attributes appearing on at least four of the six forms into several instruments designed to measure the perceived traits of subjects and their siblings.

A semantic differential scale as developed by Osgood et al. (1957), is essentially a restricted word association test consisting of a number of scales, each of which is a bipolar adjective pair. In this way, the semantic differential measures individual's reactions to concepts in

terms of ratings on scales defined by contrasting adjectives on a seven-point scale. Both direction and intensity of response can be measured.

Originally designed by Osgood and associates (1957) to measure the connotative meaning of concepts, the validity of the semantic differential has been established by Snider and Osgood (1969), and it has been shown to be sufficiently reliable by Heise (1969) and Osgood (1957). Additionally, Lohman (1982) found that depending on the age group, between 77.66% and 80.32% of the children in her study were able to repeat their responses when retested two weeks later. Testing for within instrument consistency, Lohman (1982) found her subject's were able to duplicate their answers at a single sitting 68.7% of the time. Hence, Lohman found the semantic differential with family constellation terms to have a high degree of measurement stability and internal consistency.

For this study, 12 terms for the semantic differential scale were selected from those found to be consistently represented on family constellation forms by the Adlerians surveyed in Lohman's (1982) investigation. These 12 items appear in Appendix A. The attributes selected were representative of each of the six factors identified by Mosak and Schulman (1971) and factor analyzed by O'Phelan

(1977). Three of the attributes on this form were repeated to determine within instrument reliability.

Psychological Position Form

The instrument used to assess perceived birth order position was derived by combining statements from three of Lohman's (1982) psychological position questionnaires, and is shown in Appendix B. The psychological position form was used to define the subjectively perceived birth order of the women in their family. A person born into the first position in a family might view themselves as an actual first born, out ahead of the others, or they could perceive themselves as striving to keep pace with their siblings, or as the youngest, even though they were chronologically oldest (Lohman, 1982).

Family Constellation Data

Family constellation information was gathered by asking subjects to list all brothers and sisters, including themselves, in chronological order. Age spacing and sex of siblings were included, as were the names of each subjects' siblings. This data was used in conjunction with the semantic differential questionnaire to describe differences in perceptions of self and siblings as they relate to birth order, and perceived birth order.

Collection of the Data

The samples were identified and selected as described in the design section of this chapter. Letters were sent to the directors of each substance abuse facility which briefly outlined the importance and purpose of the study (Appendix C). Follow-up phone calls were made to arrange a time when the information provided by the letters could be discussed in detail, and to establish when data collection would begin. Those facilities granting permission for data collection were provided with letters of informed consent specifically outlining the procedures to be followed in conducting this investigation, the benefits and risks to the institution and the obligations of the researcher (Appendix D). Written informed consent was also obtained from each subject prior to becoming a participant (Appendix E).

Data Analysis

Both inferential and descriptive methods were employed in the analysis of the data. Data were analyzed initially for evidence of reliability. Means and standard deviations for women in both samples were calculated. Twelve separate one-way analyses of variance were then used to examine the differences in self-perception between the

academic sample and the chemically dependent sample. Due to multiple univariate comparisons, academic and substance abusing women's perceptions of themselves and their siblings were assessed by means of paired t-tests. Small sample sizes mandated the use of descriptive statistics in examining birth order and perceived birth order.

Within instrument reliability of the data was estimated by repeating the terms serious-humorous, selfish-unselfish, and demanding-nondemanding on the semantic differential scale. Correlation coefficients were then calculated.

A one-way analysis of variance for each of the 12 attributes was used to examine differences between chemically dependent and academic women's perceptions of themselves on the Family Constellation semantic differential. F ratios were corrected for alpha inflation using the procedures outlined in Keppel (1982). Bartlett's Box F was used to test for homogeneity of variance because loss of subjects from the academic sample resulted in unequal sample sizes (Huck, Cormier & Bounds, 1974). Differences in perception of siblings and self on the 12 attributes were evaluated by paired t-tests for both the academic and the substance abusing women. Differences less

than $p=.003$ ($p<.05$ corrected for alpha slippage) were considered statistically significant.

Birth order data were examined to determine the number of women in both samples representing each birth order position. Data on perceived birth order were then examined descriptively to evaluate what percentage of the women in each sample described themselves as deviating from actual birth order. A final analysis was conducted to determine if women's subjective view of their position in their family (corrected for alpha slippage) were considered statistically significant.

Birth order data were examined to determine the number of women in both samples representing each birth order position. Data on perceived birth order were then examined descriptively to evaluate what percentage of the women in each sample described themselves as deviating from actual birth order. A final analysis was conducted to determine if women's subjective view of their position in their family was affected by family size.

CHAPTER 4

RESULTS

This chapter describes the results of the statistical analyses of this study. Results are discussed initially as they pertain to instrument reliability and validity. Subsequent, findings are examined as they relate to the purpose of the investigation. The remainder of the chapter discusses the results as they pertain to the specific objectives of the study.

Within Instrument Reliability

Data from the Family Constellation semantic differential were assessed for within instrument reliability by repeating the terms serious-humorous, selfish-unselfish and demanding-nondemanding. Subjects were instructed that three items on the questionnaire were repeated, to work quickly, and to not look back. Subjects' ability to repeat their responses at a single sitting ranged from 89% to 97%, somewhat higher than Lohman's findings (Lohman, 1982). As indicated by these results, within instrument reliability was quite high on this instrument, for this group of subjects. No validity data exists for Family Constellation attributes.

Correlation coefficients were calculated between the individual terms on the semantic differential with Family Constellation terms. The intercorrelations ranged from a low of $r=.45$ to a high of $r=.98$. As would be expected, the highest intercorrelations were between repeated items. Even though the correlation matrix for the Family Constellation semantic differential was nearly singular, terms such as serious and intelligent whose intercorrelation was $r=.71$ would be expected to be interrelated. The percentage of overlapping variance between the terms was found by squaring correlation coefficients. For the terms serious and intelligent, the proportion of shared and unique variance was evenly divided, yielding 50% for each. Relatively moderate intercorrelations were found between terms such as cruel and sensitive and demanding and considerate $r=.56$ and $r=.49$, respectively. The percentage of shared variance was 31%, for cruel and sensitive, thus 69% of the variability of the two terms was unique. Shared variance of the terms demanding and considerate was found to be 24%, resulting in 76% of the variance being unique. Athletic and sociable and masculine and rebellious produced intercorrelations of $r=.69$ and $r=.75$, respectively, resulting in the proportion of shared and unique variance being 47% and 53% for athletic and sociable; while the proportion of shared and unique

variance for masculine and rebellious was 56% and 44%, respectively. As these findings have indicated, the terms on the semantic differential were distinct, even though some of them measured similar concepts.

Purpose of the Study

The purpose of this study was to examine the association between chemically dependent women's perceptions of themselves and their siblings on 12 attributes, as compared to academic women's view of themselves and their siblings on those same traits. The interrelatedness of these perceptions to birth order and psychological position were also examined.

The hypothesis of this investigation was that women regard themselves differently on various traits compared with their perception of that same trait in their siblings. Initially, twelve independent one-way analyses of variance were calculated, using the Statistical Program for the Social Sciences, to examine any differences in the overall perceptions women had of their siblings.

Loss of subjects from the academic sample resulted in an unequal number of scores in the groups, therefore Bartlett's Box F tests of equal variances were run to determine if the homogeneity of variance assumption was met. No significant differences in group variances were found.

Due to the bipolar nature of the instrument, data were corrected for differences in direction by subtracting subjects' mean scores from seven.

This preliminary analysis was conducted to ascertain any global differences in the way the women studied perceived their siblings. The results, summarized in Table 1, indicate that fundamentally women in this study viewed their siblings quite similarly on all attributes. More specifically, although differences between groups were evident, most were so small as to not yield statistical significance. Women in this study perceived their siblings as significantly more sociable and more athletic. Although when data were corrected for inflation of alpha due to multiunivariate comparisons, the only significant difference remaining was for the attribute "athletic."

The second part of the hypothesis stated that chemically dependent women regarded themselves as different from the women who were academic achievers. This hypothesis was examined by calculating 12 separate one-way analyses of variance. An examination of the data in Table 2 indicates that chemically dependent women perceived themselves as more serious and more sensitive, when compared to women in the academic sample. Additionally, women in the substance abusing sample regarded themselves as less sociable, less

Table 1. Means, standard deviations and F values depicting chemically dependent women's perceptions of their siblings compared to academic women's perceptions.

Terms	Chemically Dependent		Academic		F
	\bar{X}	sd	\bar{X}	sd	
Serious	3.15	1.32	2.92	1.27	<1.00
Sociable	3.80	1.24	4.53	1.09	5.45*
Intelligent	4.11	1.41	4.11	1.15	<1.00
Selfish	3.44	1.26	2.89	1.76	1.85
Demanding	3.76	1.37	3.99	1.69	<1.00
Athletic	2.95	1.51	4.11	1.66	7.71*
Considerate	3.14	1.44	3.62	1.45	1.55
Masculine	3.37	1.56	3.78	1.52	1.04
Rebellious	3.44	1.67	3.59	1.77	<1.00
Cruel	2.87	1.62	2.27	1.62	2.00
Good Looking	4.23	1.25	4.49	1.22	<1.00
Sensitive	3.94	1.57	3.69	1.50	<1.00

*p>.05 (corrected for alpha slippage)
dfs = 1,56

Table 2. Means, standard deviations and ANOVA results depicting perceptions of self for chemically dependent and academic women.

Terms	Chemically Dependent		Academic		F
	\bar{X}	sd	\bar{X}	sd	
Serious	4.40	1.45	3.65	1.31	4.32
Sociable	3.60	1.67	4.37	1.33	3.64
Intelligent	4.27	1.14	5.00	.72	8.41*
Selfish	2.30	1.68	2.36	1.45	<1.00
Demanding	2.80	2.12	2.97	1.87	<1.00
Athletic	3.07	2.32	3.93	2.11	2.12
Considerate	4.27	1.70	4.90	.83	3.10
Masculine	2.73	1.78	2.66	1.64	<1.00
Rebellious	3.49	2.18	3.04	2.00	<1.00
Cruel	1.83	1.69	1.26	.85	2.45
Good Looking	3.52	1.92	4.00	1.33	1.21
Sensitive	5.42	1.01	4.75	1.43	4.09

* $p > .05$ (adjusted for alpha slippage)
dfs = 1,56

athletic, and not as considerate or as good looking as the academic women visualized themselves. The test for the attribute "intelligent" was significant, favoring the academic group, and remained significant after correcting for alpha slippage.

Tests for homogeneity of variances using Bartlett's Box F were recalculated because subject attrition resulted in sample inequality. These tests were not significant.

As enumerated in Table 3, results of paired t-tests indicated that all women in this study judged themselves to be somewhat different from their siblings. The results of these comparisons revealed that women described themselves as less demanding, less rebellious, and not as masculine or cruel as their siblings. Similarities between these perceptions and those in Table 1 are evident on the variables serious and cruel. Significant differences were found on the terms serious, selfish, considerate, cruel, and sensitive. Separate correlated t-tests were then conducted to determine which group contributed to the significant differences.

Academic women's perception of themselves and their siblings were examined by means of separate paired t-tests. Results (Table 4) indicated that women who were academic achievers regarded themselves as more sensitive and serious

Table 3. Means, standard deviations and t-test results for all women's perceptions of self as compared to their perceptions of siblings.

Term	Women		Siblings		t
	\bar{X}	sd	\bar{X}	sd	
Serious	3.99	1.43	3.04	1.28	3.74*
Sociable	4.04	1.57	4.08	1.23	<1.00
Intelligent	4.60	1.01	4.11	1.30	2.13
Selfish	2.34	1.55	3.20	1.52	3.08*
Demanding	2.92	1.96	3.82	1.53	2.93
Athletic	3.52	2.25	3.49	1.69	<1.00
Considerate	4.57	1.35	3.37	1.44	4.75*
Masculine	2.72	1.55	3.44	1.45	2.45
Rebellious	3.25	2.08	3.39	1.57	<1.00
Cruel	1.57	1.35	2.50	1.51	3.80
Good Looking	3.80	1.64	4.31	1.18	2.24
Sensitive	5.02	1.33	3.80	1.52	4.61*

*p>.05 (adjusted for slippage)
dfs = 58.

Table 4. Means, standard deviation and t-test results depicting academic somen's perception of self and siblings

Term	Self View		Sibling View		t
	\bar{X}	sd	\bar{X}	sd	
Serious	3.65	1.31	2.92	1.27	2.21
Sociable	4.38	1.33	4.49	1.10	<1.00
Intelligent	5.00	.72	4.11	1.15	3.37*
Selfish	2.36	1.44	2.89	1.76	1.37
Demanding	2.97	1.87	3.96	1.69	2.35
Athletic	3.93	2.11	4.15	1.68	<1.00
Considerate	4.90	.83	3.62	1.45	4.70*
Masculine	2.66	1.64	3.57	1.35	2.05
Rebellious	3.04	2.01	3.46	1.67	<1.00
Cruel	1.26	.85	2.16	1.56	2.72
Good Looking	4.00	1.33	4.49	1.22	1.71
Sensitive	4.75	1.43	3.69	1.50	3.10

*p>.05 (corrected for alpha slippage)
dfs = 28

than their siblings. Academic women also viewed themselves as less athletic, and masculine than their siblings and slightly less good looking and sociable in conjunction with regarding themselves as less demanding and selfish. For the academic sample the terms intelligent and considerate were significantly different, and remained significant following correction for inflated alpha.

Another objective of this study addressed the differences in perceptions of self and siblings of the substance abusing sample. Specifically, the goal was to compare differences in perceived traits of chemically dependent women to their view of that same trait in their siblings. These findings suggested (Table 5) that while substance abusing women viewed themselves as less selfish, less demanding and more considerate than their siblings they also perceived themselves as slightly more sociable, intelligent and athletic although not as good looking. Significant differences, after correction for inflated alpha, in perceptions of self and siblings for chemically dependent women occurred on the traits serious and sensitive.

The final objective was to examine the relationship between birth order and perceived birth order to perceptions of self and siblings for both academic and chemically

Table 5. Means, standard deviations and t results depicting chemically dependent women's perceptions of self and siblings.

	Self View		View of Siblings		
	S	sd	X	sd	t
Serious	4.40	1.45	3.15	1.32	3.19*
Sociable	3.60	1.67	3.20	1.24	<1.00
Intelligent	4.27	1.43	4.11	1.41	<1.00
Selfish	2.30	1.68	3.44	1.26	2.76
Demanding	2.80	2.11	3.76	1.37	2.10
Athletic	3.07	2.32	2.95	1.51	<1.00
Considerate	4.27	1.70	3.14	1.45	2.55
Masculine	2.73	1.48	3.24	1.42	1.26
Rebellious	3.49	2.18	3.32	1.56	<1.00
Cruel	1.83	1.69	2.73	1.45	2.34
Good Looking	3.52	1.92	4.14	1.15	1.67
Sensitive	5.42	1.02	3.83	1.48	4.31*

*p<.05 corrected for alpha slippage
df = 28

dependent subjects. Small sample sizes prohibited statistical analysis. Therefore, the association between birth order and psychological position for academic and substance abusing women was conducted utilizing descriptive methods.

Birth Order and Perceived Birth Order

Due to small sample sizes, three dominant psychological positions were used to determine perceived birth order (Lohman, 1982). Psychological position one included all subjects describing themselves as ahead of their brothers and sisters or who "felt" they had caught up to and gone ahead of their siblings (Appendix F). Subjects who "felt" squeezed or who were "strivers" were categorized as occupying psychological position two (Appendix G). Those subjects characterizing themselves as "youngest" or "not able to keep up" comprised psychological position three (Appendix H).

Actual birth order of both academic and chemically dependent women is summarized in Table 6. First-born academic women comprised 46.4% of the sample, with 30% of the chemically dependent women occupying the first ordinal position. Second-born women constituted 25% of the academic sample and 30% of the substance abusing group.

Table 6. Actual birth order of academic and chemically dependent women expressed in percentages.

	Birth Order					
	First	Second	Third	Fourth	Fifth	Sixth
Academic	46.4%	25%	17%	3.3%	7%	
Chemically Dependent	33.33%	30%	20%	13.33%		3.33%

N = 28 academic

N = 30 chemically dependent

Seventeen percent of the academic sample were born third, while 20% of the chemically dependent group occupied the third sequential position. The remainder of the subjects were distributed as follows: 3.5% of the academic women were born fourth, as were 13.33% of the drug dependent sample, with 2% of the academic group being born fifth, while 3.33% of the chemically dependent subjects were born sixth.

The association of actual birth order to perceived birth order for academic women is represented in Table 7. In general, more women, N=13, in the academic sample who were chronologically first born described themselves as psychologically first--48.15%. Four women (14.8%) in the academic sample who were second borns judged themselves to be first borns, while one woman who was born third described herself as psychologically first. Two women (7.4%), in the academic sample who were born second in their families also viewed themselves as second psychologically, while one woman who was born second described herself as occupying the third psychological position.

Table 7. Actual and perceived birth order of academic women expressed as percentages.

Actual	Perceived Birth Order					
	I	%	II	%	III	%
1	13	48.5				
2	4	14.8	2	7.4	1	3.7
3	1	3.7	2	7.4	2	7.4
4						
5			2	7.4		

N = 28

With the previously noted exception, academic women who were sequentially third viewed themselves as either in the second or third psychological positions, with two in each category. No one occupied the fourth ordinal position. Both of the academic women born into the fifth ordinal position described themselves as being psychologically second.

In the drug addicted sample, as enumerated in Table 8, five (28.5%) of the women who were first-borns in their families, saw themselves as also being psychologically first. Two (7.1%) of the women occupying the ordinal position of first viewed themselves as second

psychologically, with three of the first-born women describing themselves as psychologically third (10.71%)

Table 8. Actual and perceived birth order of chemically dependent women expressed in percentages.

Actual	Perceived Birth Order					
	I	%	II	%	III	%
1	5	17.85	2	7.14	3	10.71
2	3	10.71	4	14.28	2	7.14
3			3	10.71	2	7.14
4					3	10.71
5						
6			1	3.57		

N = 28

Three women (10.71%) born into the second ordinal position described themselves as first borns psychologically, with four second borns (14.8%) describing themselves as "feeling" psychologically second. Two substance abusing women (7.14%) who were second borns regarded themselves as occupying the third psychological position.

Of the five chemically dependent women born into the third position, three of them categorized themselves as psychologically second, and two as psychologically third. The three women born fourth in their families viewed themselves as being psychologically third, with the only woman who was sixth in her family viewing herself as occupying the second psychological position.

Family Density Data, Birth Order and Perceived Birth Order

Family density data has frequently been neglected as a variable in studies examining birth order (Manaster, 1977; Schooler, 1972; Shulman & Mosak, 1977). This study examined family size and its relationship to birth order and perceived birth order of academic and substance abusing women. Small sample sizes necessitated describing only two and three children families.

In this study family size ranged from two to six with the largest proportion of the women being reared in families of size three, N=24 (42.10%) women in all. Families of size two made up the next largest group with N=16 (35.62%) women. Nine families had six children, seven had four, and one subject came from a family of five.

Actual birth order and its relationship to family size and academic achievement is described in Table 9. Three

Table 9. Family size and actual birth order for academic women.

Family	Birth Order									
	1	%	2	%	3	%	4	%	5	%
2	8	28.57								
3	3	10.71	4	14.28	3	10.71				
4	1	3.57	2	7.14	1	3.57	1	3.57		
5									1	3.57
6	1	7.14	1	3.57	1	3.57				

N=28

children families were composed of three first-born women, four born second and three born third. Eight women in the two children families were first borns.

As was expected, more women in this sample of academic achievers, regardless of family size, perceived themselves as first borns 70.10% (19) versus 46% (13) who were actually born in to the first position. Seven of the women perceiving themselves as first borns came from two children families, while five subjects were from three children families (Table 10).

Table 10 Perceived birth order and family size of academic women.

Family Size	Perceived Birth Order					
	I	%	II	%	III	%
2	7	25.92				
3	5	18.52	2	7.41	3	11.11
4	4	14.82	1	3.70	1	3.70
5						
6	3	11.11	1	3.70		

N = 27

Women who viewed themselves in psychological position two were distributed as follows: two from families with three children, and one each from families with four and six children. Psychological position three contained three women from family size three and one from family size four.

The relationship between birth order, perceived birth order, and family size for chemically dependent women is summarized in Tables 11 and 12. Enumerated in Table 11 is the association of actual birth order with family size, while Table 12 delineates the distribution of psychological position with family density.

In the substance abusing sample, six subjects from families with two children were chronological first borns, and six from two children families were second borns, or 20% of the sample, respectively. Families with three children contained two first borns, one second born, and three children who were born third, or last.

The psychological picture for the chemically dependent sample was somewhat different. Across family size, $N=9$, or 31.3% of the chemically dependent subjects described themselves as occupying the first psychological position, while $N=12$, or 41.38% felt they were psychologically third.

Table 11. Birth order and family size of chemically dependent women.

Family Size	Birth Order												
	1	%	2	%	3	%	4	%	5	%	6	%	
2	6	20.00	6	20.00									
3	2	6.66	1	3.33	3	10.00							
4			1	3.33	2	3.33	2	6.66					
5													
6	2	6.66	1	3.33	1	3.33	1	3.33			2	6.66	

N=30

Table 12. Psychological birth order and family size of chemically dependent women.

Family Size	Psych I	%	Psych II	%	Psych III	%
2	6	20.68	1	3.44	4	13.79
3	2	6.89	3	10.34	4	13.79
4	1	3.44	1	3.44	2	6.89
5	0				1	3.44
6			3	10.34	1	3.44

N=28

Psychological position two also was represented by N=8, or 28.5% of the subjects.

For the three dominant psychological positions, women from two children families (N=11) were distributed as follows: six in position one, one in position two, and four in position three. Family size three (N=9) had two subjects in position one, three in position two and four in the third position.

Summary

To summarize, the perceptions substance abusing and academic women held of their siblings were quite similar, with the only statistically significant difference being for the term "athletic." Global differences between academic and chemically dependent women's views of self differed significantly on the attribute "intelligent." When combined, both group's judgments of their siblings were significantly different for the attributes "serious, selfish, considerate, cruel, and sensitive." Subsequent calculations of correlated t-tests for each group indicated that academic women regarded themselves as significantly different from their siblings on the traits "intelligent" and "considerate," while chemically dependent women judged themselves to be significantly different from their siblings on the terms "sensitive" and "serious."

For both actual and perceived birth order, first born academic women were overrepresented. To the contrary, while a large proportion of the substance abusing sample were chronologically first, the majority regarded themselves as occupying the third psychological position.

CHAPTER 5

CONCLUSIONS

This chapter provides an interpretation of the results as they relate to the purpose of the study. A synopsis of the research hypothesis and objectives are followed by a summary of the statistically significant findings, as they pertain to the objectives. Limitations of the study, implications of the significant results, and suggestions for future research comprise the balance of the chapter.

Purpose of the Study

This research was a preliminary effort to compare chemically dependent and academic women's subjective perceptions of their birth order. A review of the existing literature on substance abusing women led to the conclusion that no definitive research had been collected on the birth order and perceived birth order of chemically dependent women. This knowledge resulted in a study designed to: (1) examine differences in women's perceptions of self and siblings as they relate to chemical dependency and academic achievement, and (2) relate those perceptions to birth order and psychological position of both substance abusing and academic women.

Statistically Significant Findings

In general, chemically dependent and academic women's perceptions of their siblings were markedly similar. The only statistically significant difference occurred for the attribute "athletic." This difference would be expected since all subjects were women and all had male siblings.

The statistically significant results of this study lend partial support to the hypothesis that chemically dependent women view themselves as somewhat different from their siblings than women who are academic achievers. Specifically, while the subjects in this study viewed themselves as moderately different from their siblings, the differences between chemically dependent and academic women's description of themselves, and those of their siblings, were statistically significant for the attributes "serious" and "sensitive", and "considerate" and "intelligent", respectively.

Research by Anderson (1981) which attempted to determine whether in retrospect alcoholic women described themselves as manifesting significantly different traits than their non-alcoholic sisters produced similar findings. Anderson (1981) concluded that as adolescents alcoholic women were more insecure and withdrawn. The terms "insecure" and "withdrawn" describe qualities similar to those defined by "serious and sensitive," qualities depicting substance

abusing women as private, easily hurt, and unsure of themselves. Descriptions such as these echo those found throughout the literature on the female alcoholic and substance abuser (Blane, 1968; McLachlan, 1979).

As would be expected, women in the academic sample regarded themselves as significantly different from their siblings on the attribute "intelligent." Melillo's (1983) study on perceived birth order and academic achievement in women found corresponding results. Most of the participants in Melillo's (1983) sample stated that they came from families in which they were encouraged to pursue higher education. Hence, "intelligence" was a trait highly valued by their parents, and adopted by the women in the academic sample.

Academic women also viewed themselves as significantly more "considerate" than their siblings. In Lohman's (1982) study designed to examine perceived sibling differences and birth order, the trait "considerate" was judged to be highly socially desirable because it frequently received the highest ratings for self among the subjects studied. The results of Lohman's study, (1982) indicated that both "intelligent" and "considerate" were attributes deemed to be highly valued, since children use these socially desirable traits as a way of distinguishing themselves in their family.

In order to establish a place of importance in their family, individuals frequently develop a unique perception of self. This self-perception is acquired by identifying with specific personality characteristics determined to be of importance by parents or other significant caretakers. Through the process of adopting parentally desired traits, or those in an opposing direction, individuals strive to distinguish themselves in their family. From an Adlerian viewpoint, these dissimilarities would not have to be on a large number of traits, since individuals develop differences as a way of establishing a sense of identity that is distinct from that of their siblings. Thus, it is not the number of perceived differences that is important in understanding chemically dependent women, but rather their sense of self-perceived difference.

Descriptive Results

Although small sample sizes prohibited statistical analysis of the perceptions of self and siblings for both groups and the interrelatedness of those perceptions to actual and perceived birth order, there were some intriguing results in the realm of birth order and psychological position.

Of major interest to the present study were those findings which associated perceived birth order with chemical dependency. As previously stated in the results

section, first-born subjects predominated in the chemically dependent sample N=10 (33.33%), with nine women regarding themselves as psychologically first (31.03%). When psychological definitions of birth order were utilized, more women in the substance abusing sample judged themselves as psychologically third, N=12 (41.38%).

While research in the area of substance abuse has not previously addressed women's perceptions of their place in their families, research on the birth order of alcoholics has been quite prolific, though less has been written about the birth order of female alcoholics (Blane & Barry, 1973). Even though inconsistent results have been found in studies of female alcoholics, previous studies have shown that ordinal last born cases do predominate (Blane & Barry, 1973).

Birth order results for the academic sample were quite consistent with those of previous studies, with N=13, or 46.42%, of the academic women occupying the first-born position (Astin, 1969; Sutton-Smith & Rosenberg, 1971). Regardless of the study examined ordinal first-borns were overrepresented among women who strive for academic achievement.

The findings of this study revealed that in the academic sample, more women also regarded themselves as psychologically first, N=18, or 66.66%, of the 27 women

comprising the sample. Melillo's (1983) investigation of birth order and perceived birth order of academic women found that 46.6% of the women she examined were first-borns, with 48.3% of the subjects perceiving themselves to be psychologically first.

Limitations

The study of birth order and its correlation with various behavioral and psychological attributes has been replete with incongruities and inconsistencies. These contradictory findings have prompted some researchers to conclude that the use of birth order as a variable has been a mistaken concept (Adams, 1971; Schooler, 1972). Mosak (1977) has suggested that these inconsistencies in the early birth order research exist not because the concept of birth order is not a tenable one, but because consideration was not taken of both ordinal and perceived birth order. Mosak has gone on to state that: "Effective research on birth order will have to take into account many more variables; the actual ordinal position, the psychological position, gender of children, and parental response" (p. 121). Researchers have also suggested that age differences between siblings and family size are important factors (Lohman, 1982; Shulman & Mosak, 1977).

The underrepresentation of women in substance abuse treatment settings imposed certain restrictions on this investigation. In order to obtain a sample of adequate size, subjects were unable to be matched on certain background variables considered important to this study.

One of these variables was sibling gender. To avoid confounding of sex with birth order, several researchers have emphasized the importance of selecting families with same-sex individuals when conducting birth order research (Lohman, 1982; Sutton-Smith & Rosenberg, 1970). Small sample size prohibited imposing this stipulation.

Other authors have referred to the importance of age spacing (Adams & Meidam, 1968; Adler, 1964; Zajonc, Markus, & Markus, 1979). The number of years separating individual's from their siblings was not controlled in this investigation and ranged from two to fourteen years. In general, siblings close in age tend to view themselves as more different than siblings who are separated by a large age difference (Adler, 1964). Mosak (1977) has held that children who are seven or more years apart are not in competition with one another. The lack of more significant differences between the subject's perceptions of self and siblings could be attributed to this factor.

Educational level of the chemically dependent sample was another variable that could have had confounding effects on the results. An initial effort was made to match the substance abusing sample on educational level with the academic sample. A preliminary investigation of the number of chemically dependent women with at least a bachelor's degree produced such a small number that it was deemed necessary to gather information on substance abusing women regardless of educational level.

Implications and Suggestions for Future Research

Collectively the results of this study indicate that chemically dependent women do regard themselves as being somewhat different from their siblings, and significantly different on the attributes "serious and sensitive," while women in the academic sample viewed themselves as significantly more "intelligent and considerate" than their siblings. Although first born chemically dependent women represented the majority of the sample, when psychological descriptions were utilized more substance abusing women regarded themselves as "youngest" or "not able to keep up." Women who were ordinal first-borns predominated in the academic sample, and were greatly overrepresented in the psychologically first position.

These findings could be related to the view chemically dependent women have of themselves. Overall, they described themselves as less good looking, less intelligent and not as sociable as their brothers and sisters in conjunction with viewing themselves as more sensitive and serious. Thus, while they were born into the first position, they abdicated that place for the last position.

In counseling chemically dependent women, knowing their perceived birth order could be useful to therapy. Viewing substance abusing women as discouraged individuals needing encouragement and support could provide assistance in helping them re-evaluate the patterns which they developed in early childhood out of a need to be different from a sibling in order to create a place of belonging in their family. Rather than focusing solely on the negative consequences of addiction which force women to admit only their shortcomings and reinforce their negative view of themselves, techniques that build on women's strengths might be utilized. Specifically, assessment techniques which help women identify both positive aspects of their lives, as well as the problems, could bring some balance into their existence and increase feelings of self-worth.

Furthermore, a program which focuses on identifying women's self-perceptions could provide insight into which views are realistic and which are unrealistic facilitating

the identification of realistic areas for change. Assistance in re-evaluating a more positive role in their family and social environment would also be valuable. Insight such as this, could provide some useful tools with which chemically dependent women could reassess behaviors and develop approaches to change.

Future research is needed which compares women's perceptions of self and siblings to those of their non-substance abusing biological sisters, in order to discern those differences which might contribute to chemical dependence. Furthermore, research needs to be conducted which samples from a more heterogeneous pool of subjects in order to have greater generalizability. In particular, longitudinal studies, building on the work of Jones (1971) and Anderson (1981) who have attempted to identify personality traits characterizing alcoholic women, are needed in the area of female substance abuse. Additionally, studies examining the connection between these characteristics and substance abusing women's perceived position in their family are also needed.

Summary

In short, the results of this study suggest that women who become chemically dependent may do so out of a need to create a place of belonging in their family. They also indicate that substance abusing women have difficulty

maintaining their first position because they perceive themselves as less adequate than their siblings on a number of important attributes. Therefore, it could be premised that women who become addicted to chemicals decide to settle for being the last and the worst in their families when they 'feel' they cannot maintain the position of first and best.

APPENDIX A

SEMANTIC DIFFERENTIAL WITH FAMILY
CONSTELLATION TERMS

Individual Code Number _____ My Birth Order _____

Below are 15 words with their opposite form. Look at the 7 possible answers. Think back to when you were 8 or 9 years old. Think about each trait listed below and thinking of yourself in your family, place an X under the trait that most clearly describes you. Then place your brothers' or sisters' name where you think they belong. There is no right or wrong answer, only the way you see it. If after you have completed this form you believe there are other traits which describe you more clearly than those listed, please write them at the end of this questionnaire. Please consider each pair and go on to the next one and do not go back.

Example:

	extremely noisy	quite noisy	fairly noisy	neutral	fairly quiet	quite quiet	extremely quiet	
	<u>X</u>	_____	_____	MARY	_____	JANET	_____	
=====								
	extremely	quite	fairly	neutral	fairly	quite	extremely	
serious	_____	_____	_____	_____	_____	_____	_____	humorous
sociable	_____	_____	_____	_____	_____	_____	_____	unsociable
intelligent	_____	_____	_____	_____	_____	_____	_____	unintelligent
selfish	_____	_____	_____	_____	_____	_____	_____	unselfish
demanding own way	_____	_____	_____	_____	_____	_____	_____	nondemanding own way
athletic	_____	_____	_____	_____	_____	_____	_____	unathletic
considerate	_____	_____	_____	_____	_____	_____	_____	inconsiderate
selfish	_____	_____	_____	_____	_____	_____	_____	unselfish

demanding	_____	_____	_____	_____	_____	_____	_____	nondemanding
own way	_____	_____	_____	_____	_____	_____	_____	own way
masculine	_____	_____	_____	_____	_____	_____	_____	feminine
rebellious	_____	_____	_____	_____	_____	_____	_____	nonrebellious
serious	_____	_____	_____	_____	_____	_____	_____	humorous
cruel	_____	_____	_____	_____	_____	_____	_____	kind
good	_____	_____	_____	_____	_____	_____	_____	not
looking	_____	_____	_____	_____	_____	_____	_____	good looking
sensitive	_____	_____	_____	_____	_____	_____	_____	insensitive

APPENDIX B

PSYCHOLOGICAL POSITION QUESTIONNAIRE

Code Number _____

I. Circle the number which most describes the way you feel. You may add additional information at the bottom if you wish.

1. I feel I can't keep ahead of my sister(s) or brother(s).
2. I feel I am ahead of my sister(s) and brother(s).
3. I feel that I can't catch up to my brother or sister and that he/she is ahead of me.
4. I feel squeezed between my brother(s) and sister(s).
5. I feel like the youngest in my family.
6. I feel like I am trying to catch up to my brother(s) and sister(s).
7. I feel I have caught up to and gone ahead of my brother(s) and sister(s).
8. I feel ahead of the brother or sister just older than I, but still not ahead of the oldest.

=====

II. Starting with the oldest, list all brother(s) and sister(s) in your family (including yourself). List the number of years older or younger than you.

Example**Your Siblings**

Oldest:

1. Brother 2 years older2. me3. Sister 1 year younger4. Brother 2 years younger

5. _____

6. _____

7. _____

Oldest:

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

APPENDIX C

LETTERS TO TREATMENT FACILITIES

As you are well aware, female substance abuse is an increasingly important public-health problem which has essentially remained unaddressed at the level which it merits. My thesis speaks directly to this concern. I shall call you later this week to request a time during which we might discuss my thesis in depth, and explore the possibility of my collecting data on chemically dependent women residing at ----- . I look forward to meeting with you.

Sincerely,

Dr. B. J. Newlon

Kristie G. Weeks

APPENDIX D
INFORMED CONSENT FORMS FOR
TREATMENT FACILITIES

INFORMED CONSENT FORM

_____ is being asked to voluntarily participate in a research project titled "Birth-Order and Psychological Position of Academic and Substance Abusing Women." The purpose of this study is to learn more about the differences between the relationship among academic women's perceived birth-order and chronological birth-order and the association of female substance abuse with birth-order and psychological position. No one will have access to any information except the researcher.

The investigator will visit _____ at a designated time, and women agreeing to participate will complete two forms: one which asks women to rate themselves and their sibling(s) on 15 traits paired with their opposite, and one which asks women to state how they see themselves in terms of being first, second, youngest, or middle children. The time required is approximately 20 to 30 minutes.

There are no risks involved. Benefits to _____ will include the opportunity to contribute to a study designed to gain understanding of how chemically dependent women perceive themselves in their families, and how this view facilitated the development and maintenance of their chemical addiction. Upon completion of this project the researcher will conduct an in-service, providing staff with a summary of the results, and discussing the implications these findings have for working with chemically dependent women.

The information collected is solely for the educational purposes of Kristie Graham Weeks' thesis project. Each participants' name will be kept confidential, through use of a five digit code number each women assigns to herself. This form of consent will be kept on file at the Counseling and Guidance Department office at The University of Arizona for six years.

Thank you for your cooperation,

Kristie Graham Weeks

Date

I have read the above form. The nature, risks, demands and benefits of the research project have been explained to me. I understand that I may ask questions throughout the course of the project, and that I am free to terminate the project at any time. Under the terms of this agreement, data collection will commence on the _____ day of October, 1985.

Signature

Date

APPENDIX E

INFORMED CONSENT FOR WOMEN

INFORMED CONSENT FORM FOR WOMEN

As a chemically dependent woman, you have been selected to participate in a study which wants to explore the way women who are chemically dependent view their birth-order position in their family. For example, do they see themselves as ahead of a sibling, or do they feel they have been overtaken by a sibling?

The time needed to answer the questions will be about twenty minutes. No one but myself will see your answers. In addition to helping me with my research, I hope that by completing these questionnaires you may learn more about how you functioned in your family. There are no risks involved in being in this study. A copy of this consent form is available to anyone who participates in this study.

Thank you,

Kristie Graham Weeks

I have read the above information. The way the project will be conducted, the demands, risks, and benefits have been explained to me. I understand that I may ask questions and that I am free to withdraw from the study at any time.

Subject's signature

Date

APPENDIX F

PSYCHOLOGICAL POSITION ONE

Psychological Position One

I feel I am ahead of my sister(s) and brother(s).

I feel I have caught up to and gone ahead of my brother(s) and sister(s).

APPENDIX G

PSYCHOLOGICAL POSITION TWO

Psychological Position Two

I feel like I am trying to catch up to my brother(s) and sister(s).

I feel squeezed between my brother(s) and sister(s).

I feel ahead of the brother or sister just older than I, but still not ahead of the oldest.

APPENDIX H
PSYCHOLOGICAL POSITION THREE

Psychological Position Three

I feel I can't keep ahead of my sister(s) or brother(s).

I feel that I can't catch up to my brother or sister and that he/she is ahead of me.

I feel like the youngest in my family.

REFERENCES

- Adams, B. N. (1972). Birth order: A critical review. Sociometry, 35, 411-439.
- Adams, B. N., & Meidam, M. T. (1971). Economics, family structure and college attendance. American Journal of Sociology, 74, 230-239.
- Adler, A. (1964). Superiority and social interest. (H. L. Ansbacher & R. R. Ansbacher, Eds.). Evanston, Illinois: Northwestern University Press.
- Adler, A. (1956). The individual psychology of Alfred Adler. (H. S. Ansbacher & R. R. Ansbacher, Eds.). New York: Harper and Row.
- Adler, A. (1980). What life should mean to you (First Perigree Printing). New York: Putnam.
- Aldoory, S. (1978). The chemical curtain: Polydrug abuse among women. Alcohol Health and Research World, 3(2), 28-36.
- Anderson, S. (1981). Alcoholic women: Personality traits during adolescence. American Journal of Drug and Alcohol Abuse, 8(2), 239-247.
- Aron, W. S. (1975, September). Family background and personal trauma among drug addicts in the United States. British Journal of Addictions, 70, 295-305.
- Astin, H. S. (1969). The woman doctorate in America. New York: Russell Sage Foundation.
- Bakan, D. (1949). The relationship between alcoholism and birth-rank. Quarterly Journal of Studies on Alcohol, 10, 434-440.
- Barry, H., Jr., Barry, H., III, & Blane, H. T. (1969). Birth order of delinquent boys with alcohol involvement. Quarterly Journal of Studies on Alcohol, 30, 408-413.

- Barry, H., III, & Blane, H. T. (1977). Birth positions of alcoholics. Journal of Individual Psychology, 3(1), 62-68.
- Beckman, L. J., Day, T., Bardsley, P., & Seeman, A. Z. (1980). Personality characteristics and family backgrounds of women alcoholics. International Journal of Addictions, 15(1), 147-154.
- Beckman, L. J. (1978). Self-esteem of women alcoholics. Quarterly Journal of Studies on Alcohol, 39(3), 491-498.
- Beckman, L. J. (1975). Women alcoholics: A review of social and psychological studies. Quarterly Journal of Studies on Alcohol, 36(7), 794-824.
- Binion, V. J. (1980). A descriptive comparison of the families of origin of women heroin users and nonusers. Addicted women: Family dynamics, self-perceptions and support systems. Services Research Monograph Series. DHEW Publication No. (ADM) 80-702. Rockville, MD: NIDA.
- Binion, V. J. (1982). Sex differences in socialization and family dynamics of male and female heroin users. Journal of Social Issues, 38(2), 43-57.
- Blane, H. T. (1968). The personality of the alcoholic: Guises of dependency (pp. 107-119). New York: Harper and Row.
- Blane, H. T., Barry, H., III, & Barry, H., Jr. (1971). Sex differences in birth order of alcoholics. British Journal of Psychiatry, 119, 657-661.
- Blane, H. T., & Barry, H., III. (1973). Birth order and alcoholism: A review. Quarterly Journal of Studies on Alcohol, 34, 837-852.
- Blane, H. T., & Barry, H., III. (1975). Sex of siblings of male alcoholics. Archives of General Psychiatry, 32, 1403-1405.

- Braiker, H. B. (1982). The diagnosis and treatment of alcoholism in women. In NIAAA Alcohol and Health Monograph 4: Special Population Issues. DHHS Publication No. (ADM) 82-1193. Rockville, MD: National Institute of Alcohol Abuse and Alcoholism.
- Cahalan, D., & Room, R. (1974). Problem drinking among American men. Rutgers Center of Alcohol Studies, Monograph 7, New Brunswick, New Jersey.
- Carlson, R. (1970). On the structure of self-esteem: Comments on Ziller's formulation. Journal of Consulting and Clinical Psychology, 34, 264-268.
- Carroll, F. J. X., Malloy, T. E., & Kendrick, F. M. (1980). Multiple substance abuse: A literature review. (In S. Gardes, Ed., National Drug and Alcohol Collaborative Project, Issues in multiple substance abuse). Services Research Monograph Series (DHEW Publ. No. ADM-80-957). Rockville, MD: National Institute of Drug Abuse.
- Carroll, J. F. X., Malloy, T. E., Roscioli, D. L., Pindjak, G. M., & Clifford, S. J. (1982). Similarities and differences in self-concepts of women alcoholics and drug addicts. Quarterly Journal of Studies on Alcohol, 4B(7), 725-738.
- Cary, E. (1937). The Roman antiquities. Cambridge, MA: Harvard University Press.
- Celentano, D., McQueen, D., & Chee, E. (1980). Substance abuse by women: A review of the epidemiological literature. Journal of Chronic Diseases, 33, 383-394.
- Celentano, D., & McQueen, D. (1984). Multiple substance abuse among women with alcohol related problems. In S. Wilsnack & L. J. Beckman (Eds.), Alcohol problems in women: Antecedants, consequences and interventions. New York: Guilford Press.
- Cloward, R., & Piven, F. F. (1979). Hidden protest: The channeling of female innovation and resistance. Journal of Women, Culture and Society, 4(4), 651-669.

- Colten, M. E. (1980). A descriptive and comparative analysis of self-perceptions and attitudes of heroin addicted women. In Addicted women: Family dynamics, self-perceptions and support systems. DHEW Publ. No. (ADM) 80-762. Rockville, MD: National Institute on Drug Abuse.
- Cooperstock, R. (1978). Sex differences in psychotropic drug use. Social Science and Medicine, 12(38), 179-186.
- Cooperstock, R. (1976). Women and psychotropic drugs. In A. McClennan (Ed.), Women: Their use of alcohol and other legal drugs. Toronto: Addiction Research Foundation.
- Corrigan, E. (1980). Alcoholic women in treatment. New York: Guilford Press.
- Cotton, N. (1979). Familial incidence of alcoholism. Quarterly Journal of Studies on Alcohol, 40(1), 89-116.
- Croake, J. W. (1981). Drug abuse among adolescents. Individual Psychologist, 18(1), 19-26.
- Curlee, J. (1967, May). Alcoholic women: Some considerations for further research. Menninger Clinic Bulletin, 31(3), 154-163.
- Curlee, J. (1970). A comparison of male and female patients at an alcoholism treatment center. Journal of Psychology, 74, 239-247.
- Dammann, G., & Ousley, N. (1976). Female polydrug abusers. In M. M. Wesson, C. J. Carlin, B. Adams, & G. Beschner (Eds.), Polydrug abuse: The results of a national collaborative study. New York: Academic Press.
- deLint, J.E.E. (1964a). Alcoholism, birth order and socializing agents. Journal of Abnormal Psychology, 69, 457-458.
- deLint, J.E.E. (1964b). Alcoholism, birth-rank and parental deprivation. American Journal of Psychiatry, 120, 1062-1065.

- Deren, S., & Koslowsky, M. (1977). Personality sex differences of addicts and treatment implications. International Journal of Addictions, 12(4), 541-551.
- Dreikurs, R. (1963). Individual Psychology: The Adlerian point of view. In J. M. Wepman & R. W. Haine (Eds.), Concepts of Personality. Chicago, IL: Aldine.
- Eckstein, D. (1978). Leadership, popularity and birth order in women. Journal of Individual Psychology, 34(1), 63-66.
- Forer, L. K. (1977). Bibliography of birth order literature in the '70s. Journal of Individual Psychology, 33(1), 122-141.
- Galton, Sir Francis. (1874). English men of science (1970 ed.). London: F. Cass.
- Goodwin, D. W. (1971). Is alcoholism hereditary?: A review and critique. Archives of General Psychiatry, 25, 545-549.
- Gossup, M. (1976). Drug dependence and self-esteem. International Journal of Addictions, 11(5), 741-753.
- Graves, R. (1959). The Greek myths (Vol. 1). New York: George Barziller.
- Griffith, J., & Powers, R. (1984). An Adlerian Lexicon. Chicago, IL: Americas Institute of Adlerian Studies.
- Guttentag, M., Salasin, S., & Belle, D. (1980). The mental health of women. New York: Academic Press.
- Hare, E. H., & Price, J. S. (1969). Birth order and family size: Bias caused by changes in birth rate. British Journal of Psychiatry, 115, 647-657.
- Heise, D. (1969). Some methodological issues in semantic differential research. Psychological Bulletin, LXXI, 688-699.

- Huck, S. W., Cormier, W. H., & Bounds, W. G., Jr. (1974). Reading statistics and research. New York: Harper and Row.
- Johnson, S., & Garzun, R. S. (1978). Alcoholism and women. American Journal of Drug and Alcohol Abuse, 5(1), 107-122.
- Kalant, O. J. (Ed.). (1980). Alcohol and drug problems in women: Research advances in alcohol and drug problems (Vol. 5). New York: Plenum Press.
- Karpman, B. (1949). The alcoholic woman. Washington, DC: Linacre Press.
- Keppel, G. (1982). Design and analysis: A researcher's handbook (2nd Ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Kinsey, B. (1966). The female alcoholic. Springfield, IL: Charles C. Thomas.
- Laskowitz, D. (1976). Drug addiction. In A. G. Nikelly (Ed.), Techniques for behavior change. Springfield, IL: Charles C. Thomas.
- Lisansky, E. (1957). Alcoholism in women: Social and psychological concomitants. Quarterly Journal of Studies on Alcoholism, 8, 588-623.
- Lohman, J. F. S. (1982). Birth order and perceived sibling differences. The University of Arizona: University Microfilms International, Ann Arbor, MI. Microfiche No. E9791,49.
- Lolli, G. (1956). Alcoholism in women. Connecticut Review of Alcoholism, 5(3), 9-11.
- Lombardi, D. (1973). The psychology of addiction. In H. Mosak (Ed.), Alfred Adler: His influence of psychology today. Park Ridge, NJ: Noyes.
- Maccoby, E. E., & Jacklin, C. N. (1974). The psychology of sex differences. Stanford, CA: Stanford University Press.
- Manaster, G. J. (1977). Birth order: An overview. Journal of Individual Psychology, 33(1), 3-8.

- Marsh, J. C., Colten, M. E., & Tucker, M. B. (1982). Women's use of drugs and alcohol: New perspectives. Journal of Social Issues, 38, 1-8.
- McAree, C. P., Steffenhagen, R. A., & Zheutlin, L. S. (1969). Personality factors in college drug users. International Journal of Social Psychiatry, 15, 102-106.
- Melillo, D. (1983). Birth order, perceived birth order and family position of academic women. Individual Psychologist, 39(1), 57-62.
- Miller, N., & Zimbardo, P. (1966). Motive for fear-induced affiliation: Emotional comparison or interpersonal similarity. Journal of Personality, 34, 481-503.
- Mosak, H. H., & Shulman, B. H. (1971). Lifestyle inventory. Chicago: Alfred Adler Institute of Chicago.
- Neld, J. B., Ward, D. E., & Edgar, T. (1977). Two interpretations of birth order. Journal of Individual Psychology, 14, 46-63.
- Nellis, M. (1980). The female fix. Boston, MA: Houghton-Mifflin.
- National Institute on Drug Abuse (NIDA). (1981). Drug abuse warning network: 1980 DAWN annual report. Rockville, MD: NIDA.
- Norman, W. T. (1969). In J. G. Snider, & C. E. Osgood (Eds.), Semantic differential technique: A source book. Chicago: Aldine.
- O'Phelan, M. L. (1977). Statistical evaluation of attributes in Adlerian lifestyle forms. Journal of Individual Psychology, 33(2), 203-212.
- Osgood, C. E., Succi, G. J., & Tannenbaum, P. H. (1957). The measurement of meaning. Urbana, IL: University of Illinois Press.
- Pepper, F. C. (1976). Birth order. In A. G. Nikelly (Ed.), Techniques for behavior change. Springfield, IL: Charles C. Thomas.

- Rathod, N. H., & Thompson, I. G. (1971). Women alcoholics: A clinical study. Quarterly Journal of Studies on Alcohol, 32, 45-52.
- Reed, B. G. (1985). Drug misuse and dependency in women: The meaning and implications of being considered a special population or minority group. International Journal of the Addictions, 20(1), 13-62.
- Richards, L. G. (1981). Demographic trends and drug abuse 1980-1995. Research monograph series. Washington, DC: NIDA.
- Sandmaier, M. (1980). The invisible alcoholics: Women and alcohol abuse in America. New York: McGraw-Hill.
- Schooler, C. (1972). Birth order effects: Not here, not now! Psychological Bulletin, 78(3), 161-175.
- Schuckit, M. A., & Morrissey, E. (1976). Alcoholism in women: Some clinical and social perspectives with an emphasis on possible subtypes. In M. Greenblatt & M. A. Schuckit (Eds.), Alcoholism problems in women and children. New York: Grune and Stratton.
- Schuckit, M. A., & Morrissey, E. (1979). Drug abuse among alcoholic women. American Journal of Psychiatry, 136(4B), 607-611.
- Seldin, N. E. (1972). The family of the addict. International Journal of the Addictions, 7(1), 97-101.
- Shulman, B. H., & Mosak, H. H. (1977). Birth order and ordinal position: Two Adlerian views. Journal of Individual Psychology, 33(1), 114-120.
- Silverman, I. J. (1982). Women, crime and drugs. Journal of Drug Issues, 12(2), 167-183.
- Suffet, F., & Brotman, R. (1976). Female drug use: Some observations. International Journal of the Addictions, 11(1), 19-33.

- Sutton-Smith, B., & Rosenberg, B. G. (1971). Sex role identity and sibling composition. Journal of Genetic Psychology, 118(1), 29-32.
- Tamerin, J. S., Tolor, A., & Harrington, B. (1976). Sex differences in alcoholics: A comparison of male and female self and spouse perceptions. Quarterly Journal of Studies on Alcohol, 3(3), 457-472.
- Toman, W. (1969). Family constellations. New York: Springer.
- Wall, J. H. (1937). A study of alcoholism in women. American Journal of Psychiatry, 93, 943-952.
- Warren, J. R. (1966). Birth order and social behavior. Psychology Bulletin, 65, 38-49.
- Wilsnack, S. (1984). Drinking, sexuality and sexual dysfunction in women. In S. Wilsnack & L. J. Beckman (Eds.), Alcohol problems in women: Antecedants, consequences, and interventions. New York: Guilford Press.
- Winokur, R. G., & Clayton, P. (1978). Family history studies IV: Comparisons of male and female alcoholics. Quarterly Journal of Studies on Alcohol, 29, 885-891.
- Wood, H., & Duffy, E. L. (1966). Psychological factors in alcoholic women. American Journal of Psychiatry, 123(3), 341-345.
- Vaillant, G. E. (1973). A 20-year follow-up of New York narcotic addicts. Archives of General Psychiatry, 29, 237-241.
- Zajonc, R. B., Markus, H., & Markus, G. B. (1979). The birth order puzzle. Journal of Personal and Social Psychology, 37(8), 1325-1341.