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LOYOLA UNIVERSITY OF CHICAGO

AN EXAMINATION OF PERCEIVED FAMILY OF ORIGIN HEALTH AND SUBSTANCE USE AMONG ADOLESCENTS IN A SUBURBAN HIGH SCHOOL DISTRICT

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF COUNSELING PSYCHOLOGY

BY

CONCETTA PETRAMALA

CHICAGO, ILLINOIS

JULY, 1994

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CHAPTER I

INTRODUCTION

Despite indicators of a gradual improvement in recent years, it is still true that the nation's secondary school students and young adults show a level of involvement with illicit drugs which is greater than has been documented in any other industrialized nation in the world (Johnston, O'Malley, & Bachman, 1992). Alcohol related accidents of all types are a leading cause of death among adolescents (Buckstein, Brent, & Kamminer, 1989), and drunk driving continues to be the number one cause of death through accident among those aged 15-24 (National Inst. on Alcohol Abuse and Alcoholism, 1989).

There is a note of promise in that longitudinal studies such as the ongoing annual national survey done by the University of Michigan (1975-1992) indicate a gradual decline in the use of illicit drugs among seniors. Nevertheless, drug usage is still striking when one considers the following statistics from the 1992 nationwide survey:

- Among high school seniors, 44% have tried an illicit drug, including 27% who have tried some drug other than (usually in addition to) marijuana.
- 8% of high school seniors have tried cocaine, including 3%

who have tried the dangerous form of cocaine called crack.

- 2% of high school seniors smoke marijuana daily and 9% had been daily marijuana smokers at some time for at least a month.

- Some 30% of seniors have had 5 or more drinks in a row at least once in the prior 2 weeks, and such behavior tends to increase among young adults 1 to 4 years past high school. The prevalence of such behavior among male colege students reaches 52%.

- About 28% of seniors have smoked cigarettes in the month prior to the survey and 19% are daily smokers.

- LSD usage has been constant among seniors at about 5% and has shown a statistically significant increase among college students from 1989 to 1991.

Even by long term historical standards in this country, these rates remain exceedingly high. Besides the immediate risks of accidental death, the short and long term effects of substance abuse are disturbing. It has been reported that marijuana is ten times more potent than it was a decade ago (Meyer, 1985), and has been linked with hormonal damage, permanent short-term memory impairment, and serious learning disabilities due to its effect on the central nervous system. Because drugs substitute chemically induced feelings for natural ones, they act as a a social and emotional retardant, shielding youths from normal problem solving experiences and impairing judgement, coping sills,

discrimination, and information processing abilities. Mood fluctuations, anxiety, hostility and depression often follow prolonged use. Any of these disabilities can lead to failure in school and severely disrupt interpersonal relationships at home and elsewhere (Milman, 1983; Smart, 1976).

Purpose of the Study

While data are available from nationwide surveys, this data may or may not be directly applicable to the communities in this study. Conversely, the data from this study may or may not reflect the problems nationwide. Developing an accurate picture of current prevalence and trends in adolescent substance usage in a specific population is an important first step in planning recommendations for treatment, early interventions, and changes in social policy for that population.

Recent studies that attempt to understand the vicissitudes of adolescent substance use and misuse speak to the need for continued examination of this enigmatic phenomenon (Newcomb & Butler, 1988). A broad consideration of possible antecedents, social, biological and psychological factors, is required for increased understanding of this issue. Research suggests that among the myriad of variables which may play a role in patterns of initial and continued use of chemical substances, a consistent factor which emerges is the role of the family

functioning (Searight et al., 1991; Piercy, Volk, Trepper, Sprenkle, 1991; Denoff, 1988; Simons, Conger, & Whitback, 1988; Weidman, 1987; Hawkins, Lishner, Catalano, & Howard, 1985). Despite the importance of family interactions there have been few instruments designed to assess overall perceived family health that are specific to this age group.

A special relationship between adolescent drug abusers and their families of origin has been widely acknowledged in theoretical writings and case studies (Attardo, 1965; Stanton & Todd, 1982; Levine, 1985) and more recently in a series of empirical studies (Searight, et al, 1991; Manley, Borduin, & Searight, 1993; Piercy, et al., 1991). These studies have mainly focused on adolescents with identified substance abuse problems in hospital based treatment programs.

The relationship between family factors and substance use in nonclinical groups, including those not in treatment, or those who might be described as regular users, "experimenters", or abstainers is less clear. Data on current usage patterns, as well as valid and reliable instruments to assess contributing factors, such as family functioning are crucial. The overall purpose of this study was threefold: (1) to extend previous research and establish normative adolescent data for a brief form of the Family of Origin Scale (FOS) (Hovestadt, Piercy, Cochran & Fine, 1985), an instrument designed to measure levels of perceived

health in one's family of origin; (2) to assess current trends in substance usage among a large sample (n=8,651) of suburban adolescents; and (3) to examine further relationships between family of origin health, levels of experimentation, patterns of use, and protective factors.

The following research questions were addressed:

1. What are the general patterns of substance use in a large sample (n = 8,651) of adolescents?

2. What are the distribution characteristics and normative data for a population of adolescents using a brief form of the Family-of-Origin scale (FOS)?

3. Is a brief form of the FOS internally consistent? Does it conform to a previously hypothesized factor structure?

4. Are there significant relationships between perceived family of origin health and patterns of use by adolescents?

5. Are there significant relationships between patterns of substance use and select protective factors (defined as factors believed to provide resilience to risk)?

Theoretical Context

From a developmental perspective, substance abuse among adolescents has been described as playing a role in the family separation-individuation process. The writings of several developmental theorists are helpful in understanding

this relationship. Levine (1985) presented a model relating the psychopharmologic effects of drugs to patterns of intimacy and distance regulation in families. His theoretical model of adolescent substance abuse argues that adolescent substance abuse is best understood as an adaptive behavior by an individual who is embedded within a rigid family organization. The substance abuse helps the individual deal with distress associated with family interactions. It becomes a means for raising estimates of self-appraisal and asserting some control over self and the environment, providing stasis in the developmental path of individual and family. It becomes essential to family members to avoid the trauma of separation and individuation.

Drugs, generally, produce effects which can be characterized as "distancing" or "intensifying." The intensifiers include amphetimines, cocaine, early phase of alcohol, barbituates and other central nervous system depressants, increasing motor behavior and other forms of social interaction. Distancers include the opiates, later stages of alcohol, hallucinogens and sometimes marijuana, and are related to decreased motor behavior, social withdrawal, and absorption into sensory stimuli.

In families with adolescent substance abuse and for whom intimacy and distance are conflictual issues, substance use can contribute to either closeness or distance. The adolescent's use of "intensifiers" can help to restore and

maintain the power roles of parents; the use of "distancers" can be effective in passively controlling the access to intimacy.

According to Bowen's (1978) family therapy model, an individual's differentiation from their family-of-origin is seen as a critical element in psychological health. Adolescents who are poorly differentiated from their families are particularly prone to responding to others from a position of emotional reactivity versus reasoned choicefulness (Bowen, 1978). Emotional closeness and independence or separation from others are necessary for adolesecents to establish satisfactory relationships with their parents and others (Framo, 1976). Autonomy occurs as the individual engages in "detriangulation," a conscious process of freeing him or herself from intense emotional attachments to his or her parents (Bowen, 1976). The development of autonomy is a necessary step in preparing the individual for making future decisions about life separate from his or her family or origin. Close, affectionate bonding with parents is believed to provide security and psychological stability for building effective relationships with others. If autonomy is achieved without foundational intimacy with significant others, one will become lonely and alienated (Framo, 1976). If intimacy is achieved without development of autonomy, one will be less effective in venturing into decision making on his or her own.

Therefore, the family needs to help the individual achieve both intimacy and autonomy.

The constructs of autonomy and intimacy, within the family of origin, were derived from Erickson's (1980) constructs of individuation and mutuality. Erickson (1950, 1959) viewed the individual's growth throughout life as a process of reaching and achieving a series of eight psychological tasks which are dominant at certain life stages. According to Erickson, although identity is important throughout life, it is only in adolescence that identity development reaches crisis proportions. Erickson (1980) used the term individuation when he commented on the process of functional independence, accompanied by social responsiblity. In his opinion, a person achieves individuation or autonomy through a socialization process during which he or she forms a positive self concept, encompassing the dimensions of inner centeredness, authenticity, and trust.

Erickson elaborated on the construct of mutuality by stating that it is the ability to relate humanely to others, regardless of age, sex, and background. Mutuality is a gradual process resulting in a person's being ready for and capable of varying degrees of intimacy. Satisfactory levels of autonomy and intimacy are developed through healthy or functional relationships with other people. He suggested that a well defined sense of personhood is an essential

precursor to establishing genuine intimacy with others. Bowen's (1978) model provides a similar perspective--an optimal balance between autonomy and intimacy is seen as essential for a healthy relationship with one's family of origin.

From the perspective of Bowen's model (1978) of triangular functioning, adolescent substance abuse may be a solution to several problems that are present in the family system. Levine (1985) described two common patterns of triangulation that occur in families with an adolescent substance abuser. Both models involve a mother who is married to an emotionally distant father. The mother becomes overinvolved with a child, commonly a son. In one scenario, marital conflict is played out over the spouse's disagreement about how to handle the adolescent's drug use. This conflict functions to divert the couples's attention from their own marital troubles, and the adolescent comes to be viewed as the problem. The balance of emotions, thus, is maintained by the adolescent's drug abuse.

In a second pattern of triangular functioning, drug abuse by an adolescent stimulates increased marital communication and interaction (Levine, 1985). For example, problems related to the adolescent abuser may function to pull an overdistant father back into the family system to deal with the behavior. Subsequently, the father's role in the family is reasserted and order is restored, with each

member assuming their "proper" role.

Summary

Substance abuse among adolescents is one of the greatest challenges of our times. Assessment of prevalence and trends, as well as increased clarification of the role of how family functioning may impact this problem is a prerequisite to effective treatment and intervention programs. To date there have been few tools specific to the adolescent age group that provide for a brief assessment of an individual's perceived overall satisfaction of relational experience with the family of origin. Recent research including factor analytic studies with the original FOS has suggested that a shorter subset of items from this scale may provide a useful, brief tool for assessment of an important construct--namely, an individual's subjective perception of satisfaction with his or her family of origin (Gavin & Wambolt, 1992; Mazer et al., 1991). In addition to assessing current trends and relationships in substance use patterns by adolescents, this study was designed to provide an initial large sample of normative data for adolescents on a proposed brief form of the FOS.

This chapter has introduced the research study on perceived family of origin health and patterns of substance use among adolescents. It has presented highlights of national trends in substance use and underscored the importance of continued research in this rapidly changing

area. Additionally, this chapter presented the research questions, theoretical rationale and significance of the study. The next chapter reviews clinical literature and empirical research. It is divided into sections covering research on family dynamics, the Family-of-Origin Scale, and protective factors. Chapter three will review the methods utilized in this work. Chapter four presents the results obtained from the research, and Chapter five provides a summary of the study, including discussion of the data, limitations of the study, implications and recommendations for future research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Studying adolescent populations is extremely important since major substance use patterns are usually in place by age 24 (Pandina & White, 1984). Johnston et al. (1992) underscores the continued need for study of this phenomeon:

> Perhaps no area has proven more cleary appropriate for the application of systematic research than the drug field, given its rapid rate of change, its importance for the well-being of the nation, and the amount of legislative and administrative intervention which continues to be addressed to it. Young people are often at the leading edge of social change--and this has been particularly true in the case of drug use. The massive upsurge in illicit drug use during the last twenty-five years has proven to be primarily a youth phenomenon, with the onset of use most likely to occur during adolescence. (p.4)

Although the literature dealing with the generic problem of adolescent substance abuse is voluminous, research that specifically deals with individual perceptions of family dynamics and the assessment of these dynamics is less established.

The change in the cultural meaning of substance use can be substantiated by the impressive statistics quoted in chapter one. Johnston's (1992) results reported that 44% of United States' high school seniors had used an illicit drug, with 30% reporting heavy drinking within the last two weeks.

The myriad of problems associated with adolescent substance abuse are well known, beginning with minor psychological and health related difficulties, to major disturbances, including alcohol related accidents, which remain a leading cause of death among adolescents (Brucksetin, et al., 1989).

Drug and alcohol abuse are significant risk factors for suicidal behavior, because they affect cognitive, social, familial, and behavioral functioning (Garland & Zigler, 1993). Brent et al. (1988) found that at least one third of adolescents who commit suicide are intoxicated at the time of death and many more may be under the influence of drugs. In another large study of completed suicide in adolescents, 10% of the victims were characterized as alcohol abusers and 12% were drug users (Hoberman & Garfinkel, 1988).

It is likely that the increased use of licit and illicit substances by youths has had an impact on research strategies and observed relationships. Many early studies that used data from the 1960s achieved high correlations between substance use and negative personality characteristics (Braucht, et al., 1973), while later studies did not (Jessor and Jessor, 1978; Ginsberg and Greenley, 1978; Kandel, et al., 1978).

It has been documented that many youths are currently engaging in substance use. So, it is likely that many individuals who manifest fewer behavioral problems are involved with some experimentation with substances. In

addition, since many adolescents are currently engaging in multiple substance abuse, distinctions between alcoholics and addicts seems of diminishing importance (Carroll, 1982). Gersick (1980) stated:

> Age, sex and socioeconomic status consistently does not show powerful effects with respect to substance use in the youth population. Overall then . . . current research supports a movement away from analyses focusing on traditional sociodemographic variables to more integrative theories of social context (especially peer and family) for both the prediction and understanding of adolescent drug use. (p. 45)

In hopes of explaining more variance, current trends are to combine social factors with psychodynamic considerations to more wholistically understand the problem of adolescent substance involvement (Greenspan, 1984). In other words, social, biological and psychopathological factors all seem to play key roles in the etiology of this phenomenon.

Research on Family Dynamics

While the role of family functioning in the general psychological well being of adolescents is well documented, family dynamics continue to be an important area for further study and delineation. Furstenburg (1990) states:

> The assumption that adolescent experience is shaped in important ways by family experience is widely embraced by developmentalists. While researchers appreciate the family's powerful impact on children's success in negotiating the period of adolescence, how that passage is linked to specific features of family structure and dynamics has not been adequately studied. Complicating the examination of this process are the profound changes that have been occurring in the family over the past several decades. (p. 147)

Research indicates that global psychological distress among teenagers is associated with elevated family conflict. Kleinman, Handal, Enos, Searight, & Ross (1989) did a study involving over 1,000 adolescents and found that measures of family cohesion and conflict were related to various measures of psychological distress, regardless of age and sex.

In addition to several studies associating family dysfunction with substance abuse (Searight, et al., 1991, Quinn, Kueall, Thomas & Joaning, 1988; Johnson & Pandina, 1991; Wills, 1992; Smart, Chibucos, & Didier, 1990), a myriad of specific adolescent psychological disorders have also been shown to be associated with family dysfunction. In a study investigating the relationship between family functioning and eating disorders, Reeves & Johnson (1992) found that several family-of-origin characteristics were inversely related to several dimensions of eating-disordered attitudes and behaviors.

Several studies investigating mood disorders and family dysfunction consistently report more disturbed family relations, particularly in the areas of communication, affective response and problem solving abilities among depressed patients (Niedermeier, Handal, Brown, Manley, & Searight, 1992; Keitner, Miller, Epstein & Bishop, 1986). Among those studies directed at investigating conduct problems, family functioning has been consistently indicated

as an important predictive factor (Henggler & Bourduin, 1990; Tolan & Lorion, 1988; Johnson & Pandina, 1991).

A number of investigators have studied family dynamics and substance abuse among adolescents in treatment programs. Denoff (1988) examined the relative importance of family factors and irrational beliefs in predicting adolescent substance abuse among 78 adolescents in a residential treatment program. Results indicated that both parents child-rearing practices and adolescents irrational beliefs were independent predictors of substance abuse. The constellation of child-rearing practices that emerged was reflective of achievement pressure and conditional approval and corresponded with the subset of irrational belief dimensions exhibited by the adolescents.

In a study examining the prevalence of family structural and dynamic factors in terms of type, frequency and multiplicity of drug use among 151 drug-using adolescents, Piercy, Volk, Trepper and Sprenkle (1991) found that in general, relational family factors, including cohesion, discipline and open communication were more salient than structural factors, such as family size, birth order, biological parents' relationship status and number of parents in the household in discriminating drug use patterns.

Using a sample of 40 adolescents from different inpatient chemical dependency programs, Searight et al.

(1991) found significant differences between perceived health of the families of origin of adolescent drug abusers and a non-clinical sample of teenagers. These authors interpreted these findings to suggest that families of adolescent drug abusers exhibit difficulty in maintaining an optimal balance between individual self-development and emotional connectedness.

Results of studies by Grovetant and Cooper (1983, 1986) underscore how individuality and connectedness in family relationships are linked with adolescent identity exploration and perspective taking. Young people expressing high levels of identity exploration were found to have fathers who were sensitive to the views and needs of others and who were accepting of different viewpoints. In addition, the mothers of these teenagers were aware of clear boundaries between them and their children. These adolescents tended to be members of families that flourished by examining their differences, but within the context of connectedness. In contrast, youths with minimal levels of identity formation and perspective taking were found in families that blurred the boundaries between members and avoided disagreements.

Yelsma, Yelsma & Hovestadt (1991) reported on the perceived levels of intimacy and autonomy in a group of self-disciplined versus externally disciplined high school students. Indications were that self-reported perceptions

of family environments vary significantly across the dimensions of deviant versus socially acceptable behavior of students, as measured by the FOS. Students requiring external discipline perceived significantly less intimacy and autonomy than self-disciplined students.

In their investigation of the families of ego-resilient children, namely children who exhibited the ability to adapt flexibly and with elasticity to changing and threatening circumstances, Block and Block (1980) found that those families expressed closeness and respect for individuality and autonomy. In a similar way it may be that the adolescent's coping style is related to his/her perception of the family climate. Shulman, Seiffge-Krenke and Samet (1987) compared adolescent coping styles across different perceived family climates and found that perception of family cohesion and organization, combined with respect for individual development, were related to a higher level of functional coping in the adolescent. A sense of lack of family support, or a sense of an overcontrolling family climate, was related to a higher level of dysfunctional coping. These observations highlight the significance of specific kinds of family relationships in the unfolding of adolescent developmental paths--paths that are associated with varied coping and adaptive outcomes.

Levine (1985) described adolescent substance abuse as a pattern of abuse of drugs by individuals who were

significantly connected, developmentally and often physically, to their family of origin. This pattern is tightly bound up with family pressures stirred by adolescence and the concommitant threats of individuation and separation. Substance abuse in this context usually functions to retard or postpone this process and can preserve rigid family alignments over many years.

Adolescent substance abuse must be considered in the context of adolescence for the individual and for the family in their life cycles. For the adolescent, it is a time of extreme egocentrism, of heightened sexuality and aggressiveness, of reawakened conflicts from childhood, and of a growing need for independence, coupled with periods of increased dependence (Elkind, 1967). Even in families that are healthy, adolescence can be disruptive and force the family system into a process of adjustment. Experimentation with alcohol and drugs by adolescents may be a part of the process (Jessor and Jessor, 1975; Schedler and Block, 1990), although Levine (1985) notes that such experimental use usually resolves itself, along with the resolution of the adolescent transition, into a pattern of culture-appropriate recreational drug use.

Recently, many researchers have suggested that occasional drug use among adolescents may best be understood as a manifestation of developmentally appropriate experimentation. Newcomb and Butler (1988) for example,

have observed that the establishment of independence and autonomous functioning is a defining feature of adolescence, and may include a wide range of experimental behavior, attitudes and activities which preclude successful identity integration. Noting that this process of testing attitudes and behaviors may include drug use, they suggest that experimental use of drugs, both licit and illicit, "...may be considered a normative behavior among United States teenagers in terms of prevalence, and from a developmental task perspective" (p. 214). Yet the problem of differentiation remains and identifying one who is at risk seems critical.

In a longitudinal study of the relation between psychological characteristics and drug use, Schedler and Block (1990) examined the differences between occasional experimenters, abstainers, and frequent users. They contended that despite consistent reports that nearly two-thirds of young adults in the United States have experimented with marijuana at one time or another, (Johnston, et.al, 1986, 1991), the vast majority of these young people do not subsequently become drug abusers. Schedler and Block investigated the psychological adjustment of not only frequent users, but those they classified as "experimenters" and "non-users" as well. The results of this recent study suggest that adolescents who experiment minimally with drugs (primarily with marijuana) were the -

best psychologically adjusted in their sample. Those who used drugs frequently were maladjusted, showing a distinct personality syndrome marked by interpersonal alienation, poor impulse control, and manifest emotional distress. Among the frequent users, the longitudinal data they employed indicated numerous signs of emotional distress as early as age 7.

In contrast, adolescents, who, by age 18 had never experimented with any drug were relatively anxious, emotionally constricted, and lacking in social skills. The early longitudinal data presented a picture of a child who is relatively overcontrolled, timid, fearful, inactive, not warm and responsive, and immobilized under stress. The authors suggested that there were psychological differences between abstainers, experimenters, and frequent drug users that could be traced to childhood and the type of parenting they received. Striking similarities were noted between the mothers of both frequent users and abstainers as compared to the experimenters. Basically, the mothers of both the frequent users and the abstainers were perceived as relatively cold and unresponsive, giving their children little encouragement while simultaneously pressuring and becoming overinvested in their children's performance. Emphasizing the crucial distinction between experimentation and abuse, the authors suggested that the meaning of adolescent drug use can be understood in terms of one's

developmental history and concommitant personality structure. The results of this study lend further credibility to the notion that problem drug use has developmental antecedents, and that family dynamics, including sensitive and empathic parenting, play a crucial role.

Stanton & Todd (1982) noted that families with a substance abuser were more likely to exhibit the folowing characteristics: a high level of multigenerational chemical dependency; primitive and direct expressions of conflict with explicit alliances; the appearance of independence among the drug abuser because of his close contact with drug using peers; mothers who are enmeshed with their children into adulthood; a high incidence of premature, unexpected or untimely deaths; and a reliance on drug abuse as a means for attaining pseudo-individuation--maintaining family ties, while simultaneously appearing defiant and independent.

The results of recent studies in which the MMPI and 16PF scores were used have indicated that the adolescent individuation process is related to substance abuse. Parents who covertly or overtly delay the normal individuation process are likely to have offspring who are prone to misuse drugs and alcohol (Spotts & Shontz, 1985).

Findings from other developmental investigations conducted with adolescents provides support for the relationship between psychological health and family

communication patterns promoting both individuality and connectedness. Using a Family Interaction Task designed to elicit the expression and coordination of a variety of points of view, Grotevant & Cooper (1985) provided evidence which supports the usefulness of monitoring both individuality and connectedness in family relationships as predictors of individual competence. Hauser et al. (1984) found that adolescents' level of ego development was associated with patterns of family interaction involving high amounts of sharing perspectives, and challenges in the context of support. Likewise, White et al. (1983) reported evidence of the continuing significance of individuality and connectedness in parent-child relationships into young adulthood.

Research on the Family-of-Origin Scale

Despite the role of family dynamics in adolescent adjustment there have been few assessment tools specific to this age group. Self-report inventories of family functioning for research and clinical practice such as the Family Environment Scale (FES; Moos & Moos, 1986) and the Family Adaptability and Cohesion Evaluation Scales (FACES; Olson & Portner, 1983) have been primarily administered to adults. Given the importance of development as an influence on emotional functioning, moral reasoning, coping skills and values (Santrock, 1990), it is likely that, as a group, adolescents have unique perceptions of their families

relative to other age cohorts. It would be valuable to have a family measure which assesses constructs relevant to adolescent development. In addition, while both the FES and FACES are psychometrically sound, neither assess the family in a manner congruent with most family intervention models. Rather, most standardized family asssment tools are unrelated to intervention models (Manley, Searight, Binder & Russo, 1990).

The adolescent Family of Origin Scale (FOS) is an adapted version of the FOS originally developed by Hovestadt et al. (1985). In its original form it is a 40 item, 10 subscale instrument which is founded upon two dimensions, Autonomy and Intimacy, believed to exist in an optimal balance among psychologically healthy individuals.

In the FOS paradigm, the healthy family develops autonomy by emphasizing clarity of expression, personal responsibility, respect for other family members, openness to others in the family and by dealing openly with separation and loss. Concurrently, the healthy family develops intimacy by encouraging the expression of a wide range of feelings, creating a warm atmosphere in the home, dealing with conflicts without undue stress, promoting sensitivity in family members and trusting in the goodness of human nature.

The FOS was developed in part from psychodynamic models of family therapy which emphasize the importance of

simultaneously maintaining emotional connectedness as well as a separate identity in relation to one's family (Bowen, 1978; Framo, 1976). Development of the FOS was also guided by one of the most comprehensive investigations of healthy families, the Timberlawn project (Lewis, Beavers, Gosset and Phillips, 1976). The theoretical basis for this study included five family aspects deemed important for developing capable, adaptive persons: power structure, family individuation, acceptance of separation and loss, perception of reality and affect (Lewis, et al, p. 51). These aspects were the bases for the development of the categories upon which Lewis et al. differentiated among healthy, mid-range and dysfunctional families. These same theoretical constructs were employed in the development of the FOS.

The FOS has demonstrated high test-retest reliability and internal consistency with both adults and college students; test-retest procedures have established a high reliability (r =.97) over a two week period, and a Chronbach's alpha of .75, suggests internal consistency (Hovestadt, et al., 1985). An internal consistency coefficient of .96 has been reported for the adolescent FOS (Manley, et al, 1990). In addition, a high test-retest coefficient was obtained in an administration to younger adolescents (Schudy, et al., 1991) along with a Chronbach's alpha of .92 in that population.

While limited and less conclusive, validity studies

have shown the FOS to discriminate between clinical and non-clinical samples (Searight, et al, 1991; Mangrum, 1988; Andrasi, 1986; Lee, Gordon & O'Dell, 1989), and alcohol and non-alcohol distressed marriages (Holter, 1982). Capps, Searight, Russo, Temple and Rogers (1993) recently provided evidence of discriminant validity with a sample of adult children of alcoholics, as did Butler (1993). In order to measure convergent validity of the scale, Gavin and Wamboldt (1992) related the FOS to instruments measuring analogous qualities of the family of origin. Using the Family Relationships Index from the Family Environment Scale (Holohan & Moos, 1983), a measure tapping the warmth, closeness, expressivity and conflict handling abilities of the family, and Bensington and Schrader's (1982) measures of current Affectional and Associational Solidarity between parents and their adult children, the FOS measures were found to be highly related to these instruments, with correlations ranging from .45 to .68 ($p < .001$).

Due in part to questions about a possible halo effect because of the retrospective nature of the form (Lee, et al., 1989), and a belief that the conceptual model underlying the FOS appeared to be particularly relevant for adolescents, Binder, Searight and Scheurman (1988) adapted the FOS to a non-retrospective form, rewriting all 40 items in the present tense. The authors have conducted a number of psychometric investigations of the adolescent version

which indicate that the scale has excellent test-retest and internal consistency reliability (Manley, Searight, Skitka, Russo and Schudy, 1991). No significant differences were found between the adolescent and the adult norms.

Since it has been suggested that early and later adolescence are distinct developmental periods, Schudy et al. (1992) administered the FOS to a group of younger adolescents (age 13-15) and found a test-retest reliability coefficient of .90 ($p < .001$) over a two week period. Internal consistency was also confirmed, with a Cronbach's alpha of .92.

While the factor structure of both versions of the FOS has been the subject of some controversy (Lee, et al, 1989; Mazer, Mangrum, Hovestadt & Brashear, 1990; Saunders, Schudy, Searaight, Russo, Rogers & Manley, 1993), research suggests that the FOS may have greater validity in the non-retrospective adolescent version (Manley, et al., 1990). To date, most of the factor studies with adolescents as well as adults have used relatively small groups of subjects, and the factor controversy remains unresolved. Nevertheless, as a result of these factor analytic studies, there is substantial evidence to support using a brief form of the FOS to provide a valuable global measure of perceived family health (Gavin & Wamboldt, 1992; Lee et al. 1989; Mazer et al, 1990; Saunders et al, 1993) by using a subset of items which relate to the quality of intrafamily communication.

Both Gavin and Wamboldt (1992) and Mazer and his colleagues (1990) suggest that a shorter subset of items as identified in their factor studies would accomplish this and provide a useful brief instrument for both clinical and research purposes. The study to be described in what follows was designed to address this issue by administering a subset of items which have previously accounted for a substantial portion of the variance to a large population of adolescents.

Research on Protective Factors

A recent article on adolescent mental health by Kazdin (1993) describes substance use and abuse as a prime example of at risk behavior. Kazdin cites several studies (Elliott, Huizinga, & Menard, 1988; Newcomb & Butler, 1988) indicating that problem behaviors, including substance abuse, teen pregnancy, delinquent, antisocial and violent behavior, dropping out of school, and running away from home often go together. This does not mean that substance abuse, delinquent behavior and academic dysfunction invariably co-occur; yet, such behaviors often come in packages. A theoretical view that captures findings that an adolescent identified with one of the behaviors (e.g., early sexual activity) is likely to have higher rates of other behaviors (substance abuse, delinquency) is referred to as problem behavior theory, which emerged from the study of adolescents (Jessor & Jessor, 1977). The theory is based on the view

that multiple problem behaviors are similar in the functions they serve for the individual. Several problem behaviors may bring similar rewards (e.g., peer acceptance) or serve common purposes (e.g., obtaining autonomy from parents). Given the scope of possible mental health problems among adolescents and the magnitude of effort required once problems have crystallized, prevention becomes a critical priority.

Kazdin (1993) noted that although treatment has received greater attention, prevention of dysfunction and at-risk behaviors should logically take place prior to considerations of treatment. Several issues present unique challenges to prevention research, including incomplete understanding of the influences leading to dysfunction or departures from adaptive development. To this end, ongoing assessment of the possible scope of at-risk behaviors and their likely correlates remains paramount, particularly in non-clinical populations.

Although less well studied, identifying characteristics that provide resilience to risk and that foster competence and adaptive outcomes may have important implications for preventive interventions. Protective factors have been identified from research which has studied at-risk populations that, despite their at-risk status, mature and adapt sucessfully, that is, without showing the conditions for which they were at risk (Kazdin, 1993).

Besides competent care from a stable family, salient factors that promote resilience of youth at risk for a multitude of problem behaviors (including substance abuse), include good learning and problem solving skills, social responsiveness to others, and competence and perceived self-efficacy (Masten, Best & Garmezy, 1990). For example, there is evidence that consistently indicates that involvement in extracurricular activities for adolescent boys is positively associated with later educational and occupational achievement (Fine, Mortimer & Roberts, 1990). Research by Hauser et al. (1985) indicates that participation in extracurricular activities is among those characteristics that are positively related to resiliency among adolescents. Additionally, several studies (Holohan & Moos, 1987; Compras, 1987; Hauser, et al, 1985; Werner & Smith, 1982) indicate that good scholastic performance is a protective factor associated with resilience.

In the study to be described in what follows, interrelationships between school grades and extracurricular activities were compared with reported patterns of use with this population. While protective factors may vary in their role in the unfolding of a target condition, such as substance abuse, confirmation of possible relationships may help focus preventive efforts.

CHAPTER III

METHOD

This research project was designed to assess current trends in substance use in a nonclinical population and examine relationships between perceived family-of-origin health, patterns of use, and protective factors. Additionally, normative data for a proposed brief form of the Family-of-Origin scale was presented and examined for adherence to a previously hypothesized single factor solution.

Hypotheses

In addition to documenting the patterns of substance use and distribution characteristics of the sample, and reporting normative data for a brief form of the Family-of-Origin scale, the following null hypotheses were tested:

1. Each item on the brief Family-of-Origin scale does not load on a single factor.
2. There is no significant relationship between perceived family of origin health and patterns of substance use by adolescents.
3. There is no significant relationship between patterns of substance use and protective factors, as measured by grades and student involvement in

extracurricular activities.

Subjects

Subjects were adolescents attending six high schools and extension programs belonging to one school district, and enrolled during the 1993-1994 academic year. This district consisted of a comprehensive public high school district representative of students comprising the northwest suburban area of the city of Chicago, Illinois. The students came from several communities in northwestern Cook County.

Table 1 presents an overview of the demographic characteristics of the students. The age of students ranged from 13 or less to 18 or more. The year in school was relatively equally distibuted, with slighlty fewer seniors than freshmen, sophomores or juniors. Males and female respondents were approximately equal in number. Employment information is also detailed in the table.

The sample was 77% Caucasian. Of the remaining respondents, approximately 8% were Hispanic/Latino, 8% Asian American/Oriental or Pacific Islander, 2% African American, less than 1% American Indian/Alaskan Native, and 3.6% listed other. These breakdowns are also listed in Table 1.

Table 1

Student Characteristics

	n	%
Age		
13 or less	385	4.7
14	1763	21.9
15	1877	23.1
16	2026	24.9
17	1709	21.0
18 or more	358	4.4
no response	60	--
	8198	100.0
Year in School		
Freshman	2221	27.2
Sophomore	1988	24.3
Junior	2082	25.5
Senior	1880	23.0
no response	27	--
	8198	100.0
Gender		
Male	4075	49.9
Female	4091	50.1
no response	32	--
	8198	100.0
Racial/Ethnic Background		
African American	172	2.1
American Indian, Alaskan Native	57	.7
Caucasian	6241	77.0
Asian American, Oriental, Pacific Islander	672	8.4
Hispanic, Latino	678	8.3
Other	290	3.6
no response	88	--
	8198	100.0
Hours per Week Employed		
0 or occasional job	4379	54.6
1-10 hours	1175	14.6
11-20 hours	1505	18.8
21-30 hours	710	8.8
More than 30 hours	254	3.2
no response	175	--
	8198	100.0

Family characteristics are summarized in Table 2. The majority of students (70.2%) lived with both natural parents, while nearly 21% lived with either one natural parent only or one natural and one stepparent. Approximately 6% of the sample lived part time with either parent, adoptive or foster parents, relatives, friends or an agency. Parent/guardian employment and family income are also detailed Table 2.

Table 2

Family Characteristics

	n	%
With Whom Do You Currently Live?		
Both natural parents	5739	70.2
1 natural/1 stepparent	782	9.6
1 natural parent and someone who is not a stepparent	953	11.7
1 natural parent only	188	2.3
Mother part of the time/ father part of the time	115	1.4
Adoptive parents	125	1.5
Foster parents	19	.2
Relatives	113	1.4
Friends	22	.3
Agency	62	.8
Other	61	.7
no response	19	--
	8198	100.0
Employment of Parents/Guardians		
Live with both parents/both work	5495	67.4
Male works	1295	15.7
Female works	1035	12.7
No one works	95	1.2
Live at an agency	64	.8
Other/no response	223	2.7
	8198	100.0
Family Income		
Lower (under $17,000)	550	6.9
Lower middle ($17,001-$30,000)	930	11.7
Middle ($30,001-$45,000)	2576	32.5
Upper middle ($45,001-$70,000)	2371	29.9
Upper (greater than $70,000)	1509	19.0
no response	262	--
	8198	100.0

Procedures

The study was conducted with the cooperation and assistance of the district. A 159 question Student Substance Abuse Survey, (Refer to Appendix A) was systematically developed as part of a follow-up to a 1990 Student Drug Survey. This ongoing assessment is one piece of a comprehensive and continuing effort to understand and create effective substance abuse prevention, intervention, and aftercare programs within the school district. The original survey was modeled in part on the University of Michigan national survey (Johnston, O'Malley & Bachman, 1986).

A total of 8,651 surveys were completed. This constituted a response rate of 89%. It should be noted that two questions which had been included in the survey listed distractor (fictitious) drugs which were included in the list of substances that students might be using. Data from students who said that they used these two drugs were carefully examined. It was determined that, in general, these students were not responding seriously to the questions, and their responses were deleted from the data set. The final sample included 8,198 students.

Students were given one week of notice and told that the district schools would again be surveying students about substance usage, attitudes, and other information. In advance of the survey administration, the schools were asked

to make efforts to help insure that students would respond thoughtfully to the survey.

All students were given the survey, including answer sheets and pencils, at the same hour of the day in each high school facility. Students were informed that the survey was not mandatory, and that information was totally confidential. The survey was completely anonymous and respondents were told not to put their names or any identifying numbers on the answer sheets. It should be noted that proctors did not circulate the rooms, nor did they view any respondent's answer sheet. Upon completion, the answer sheets were placed in an envelope by each student, with the last student sealing the envelope. In lieu of completing the survey, students had the option of reporting to study hall or returning a blank survey. The survey questions, all multiple choice, took approximately 35 minutes to complete.

Instrumentation

The Student Substance Abuse Survey contained 159 multiple choice questions which were developed from the following list of goals:

1. the conditions of initial substance usage.
2. the changes in patterns, extent, frequency and conditions of substance usage since initial use.
3. the extent, frequency, and conditions of current substance usage.

4. demographic, family, attitudinal, school, behavioral and health variables.

5. student perceptions of family of origin health.

Embedded in the survey, following demographic and family questions, were 14 original items from the Family of Origin Scale (Hovestadt, et al., 1985) rewritten in the nonretrospective format (Binder, et al., 1988) for adolescents. They were scored on a 5-point Likert-type scale, 5 being the most "healthy" response and 1 being the least "healthy" response.

The items were chosen based on previous factor analytic studies (Mazer et al. 1990, Gavin & Wamboldt, 1993; Lee et al., 1989), and in consultation with the original author (Hovestadt, A.J., November, 1993). The results of these prior studies have indicated that these smaller subset of items, which have previously accounted for a major portion of the variance, could possibly provide a global rating of perceived family health.

The Family-of-Origin Scale (FOS) was developed by Hovestadt, Anderson, Piercy, Cohchran and Fine (1985) to measure perceived levls of autonomy and intimacy in the subject's family of origin, and to infer a level of "health" (or healthy functioning) in that family. Assessment of a level of healthiness in one's family of origin rests on the assumption that "perceived reality is reality," and perceptions of self and others are important (although not

the only) indicators of the interactions within the family.

As reported in Chapter II, numerous studies have been done with adults, college students, and both older and younger adolescents in which good internal consistency and test-retest reliabilities were established, with coeffients ranging from .75 to .97 (Hovestadt, et al., 1985; Manley, et al., 1990; Schudy, et al., 1991).

Validity studies have shown that the FOS can be used to discriminate between clinical and nonclinical samples (Searight, et al., 1991; Mangrum, 1988; Andrasi, 1986; Lee, Gordon & O'Dell, 1989). Evidence of discriminant and convergent validity has also been shown (Capps, et al., 1993; Gavin & Wamboldt, 1992). While the most controversial aspect of this scale is its proposed factor structure, it appears particularly suited for adolescents in the nonretrospective version, and there is evidence that it can provide an overall indication of perceived global family health in a shortened form (Gavin & Wamboldt, 1992; Mazer, et al., 1990; Binder, et al.,1988; Manley, et al., 1990; Saunders, et al., 1993).

Data Analysis

Descriptive statistics, including frequency distributions and cross tabulations were used in addressing patterns of use (research question one). Normative and distribution of data for the FOS and demographic relationships (research question two) are presented with

frequency distributions, and correlational analyses.

Preliminary data analysis adressing research question three involved assessing the psychometric characteristics of the brief form of the FOS. A confirmatory factor analysis was performed using EQS, to confirm a previously hypothesized single factor solution. Internal consistency reliability was determined using Cronbach's alpha.

The relationships between perceived family of origin health, patterns of use, and protective factors (research questions four and five) were addressed using a combination of correlational analyses and t-tests.

CHAPTER IV

RESULTS

The chapter is divided into sections corresponding to the research questions addressed. The patterns of substance use for this population are described in the first section. In section two the normative data sets for the FOS, along with results relating to internal consistency and the confirmatory factor analysis of the Family-of-Origin scale (null hypothesis #1) are presented. The relationships between the FOS scores and the patterns of use (null hypothesis #2) and the relationships among patterns of use, protective factors and FOS (null hypothesis #3) are presented in the final two sections.

Patterns of Substance Use

The percentages reported in Table 3 provide a comparative rank ordering of overall student substance usage: (never used, used 1-10 times (experimental use), and used 11 or more times (regular use)). Alcohol (65%), tobacco (42%), and marijuana (23%) were reported to be the substances most frequently used by students. A more fine grained comparative ranking of specific substance use, including frequency of lifetime use, age at first use, specific history of use and usage in the past 30 days for

selected drugs is presented in Tables 4 through 7.

Table 3

Overall Rank Ordering of Student Substance Usage

	% Never Used	% Experimental (1 - 10 times)	% Regular (11+ times)
Alcohol	35	39	27
Tobacco	58	17	25
Marijuana	77	11	12
Chewing Tobacco	83	12	5
Misused Non-Prescription Drugs	84	12	5
Inhalants	86	11	3
Hallucinogens	92	6	2
Stimulants	94	4	2
Depressants/ Tranquilizers	95	4	.8
Other narcotics	96	4	.8
Cocaine	97	3	.8
PCP	97	2	.5
Steroids	98	1	.6
Heroin/Methadone	99	.9	.4

Table 4

Comparative Frequency of Substance Usage

How often have you used ...?		n	%
Alcohol			
	Never	2772	34.6
	1-2 times	1608	20.1
	3-10 times	1484	18.5
	11-20 times	719	9.0
	21+ times	1418	17.7
Tobacco			
	Never	4616	57.5
	1-2 times	769	9.6
	3-10 times	620	7.7
	11-20 times	316	3.9
	21+ times	1710	21.3
Marijuana			
	Never	6232	76.9
	1-2 times	489	6.0
	3-10 times	423	5.2
	11-20 times	217	2.7
	21+ times	738	9.1
Chewing tobacco			
	Never	6753	83.4
	1-2 times	645	8.0
	3-10 times	314	3.9
	11-20 times	113	1.4
	21+ times	276	3.4
Misuse non-prescription drugs			
	Never	6769	83.7
	1-2 times	594	7.3
	3-10 times	345	4.3
	11-20 times	137	1.7
	21+ times	247	3.1

Table 4 (continued)

How often have you used ...?	n	%
Inhalants		
Never	6232	76.9
1-2 times	489	6.0
3-10 times	423	5.2
11-20 times	217	2.7
21+ times	738	9.1
Hallucinogens		
Never	7485	92.1
1-2 times	311	3.8
3-10 times	162	2.0
11-20 times	65	.8
21+ times	103	1.3
Stimulants		
Never	7560	93.7
1-2 times	216	2.7
3-10 times	132	1.6
11-20 times	51	.6
21+ times	108	1.3
Depressants/ tranquilizers		
Never	7765	95.5
1-2 times	209	2.6
3-10 times	94	1.2
11-20 times	25	.3
21+ times	41	.5
Cocaine		
Never	7861	96.8
1-2 times	145	1.8
3-10 times	55	.7
11-20 times	27	.3
21+ times	36	.4
PCP		
Never	7899	97.3
1-2 times	128	1.6
3-10 times	44	.5
11-20 times	20	.2
21+ times	24	.3

Table 4 (continued)

How often have you used ...?	n	%
Other narcotics		
Never	7773	95.7
1-2 times	190	2.3
3-10 times	104	1.3
11-20 times	22	.3
21+ times	37	.5
Steroids		
Never	7963	98.4
1-2 times	58	.7
3-10 times	28	.3
11-20 times	13	.2
21+ times	33	.4
Heroin/ methadone		
Never	8028	98.8
1-2 times	57	.7
3-10 times	16	.2
11-20 times	12	.1
21+ times	13	.2

Table 5

Age of First Use of Selected Drugs

How old were you when you tried ...?	n	%
Alcohol		
Never	2320	29
Elementary	1073	13
Junior High	2551	32
Grade 9	1163	14
Grade 10	591	7
Grade 11	283	4
Grade 12	101	1
Tobacco		
Never	4363	54
Elementary	571	7
Junior High	1604	20
Grade 9	805	10
Grade 10	418	5
Grade 11	261	3
Grade 12	95	1
Marijuana		
Never	6159	76
Elementary	91	1
Junior High	432	5
Grade 9	562	7
Grade 10	497	6
Grade 11	277	3
Grade 12	107	1
Inhalants		
Never	7004	86
Elementary	194	2
Junior High	413	5
Grade 9	208	3
Grade 10	166	2
Grade 11	114	1
Grade 12	37	.6

Table 6

History of Usage of Drugs

What is your history of usage regarding ...?	n	%
Alcohol		
Never tried	2124	26
Have experimented	4133	51
Used regularly; have now quit	353	4
Tried to quit; started again	65	.8
Haven't quit; thinking about it	239	3
Not interested in quitting	1177	15
Tobacco		
Never tried	4282	53
Have experimented	1699	21
Used regularly; have now quit	647	8
Tried to quit; started again	357	4
Haven't quit; thinking about it	477	6
Not interested in quitting	666	8
Marijuana		
Never tried	6144	76
Have experimented	875	11
Used regularly; have now quit	266	3
Tried to quit; started again	82	1
Haven't quit; thinking about it	183	2
Not interested in quitting	581	7
Inhalants		
Never tried	6990	86
Have experimented	824	10
Used regularly; have now quit	171	2
Tried to quit; started again	17	.2
Haven't quit; thinking about it	26	.3
Not interested in quitting	117	1

Table 6 (continued)

What is your history of usage regarding ...?	n	%
Hallucinogens		
Never tried	7567	93
Have experimented	341	4
Used regularly; have now quit	77	.9
Tried to quit; started again	16	.2
Haven't quit; thinking about it	24	.3
Not interested in quitting	132	.2
Cocaine		
Never tried	7784	96
Have experimented	217	3
Used regularly; have now quit	51	.6
Tried to quit; started again	16	.2
Haven't quit; thinking about it	10	.1
Not interested in quitting	70	.9
Other illegal drugs		
Never tried	7622	94
Have experimented	304	4
Used regularly; have now quit	90	1
Tried to quit; started again	24	.3
Haven't quit; thinking about it	21	.3
Not interested in quitting	85	.1

Table 7

Frequency of Usage in the Past 30 Days

In the last month how often have you used ...?	n	%
Alcohol		
Do not use	4633	59
1-2 times a month	2224	28
1-2 times a week	741	10
3-5 times a week	175	2
Daily	66	.8
Tobacco		
Do not use	5543	70
1-2 times a month	761	10
1-2 times a week	342	4
3-5 times a week	261	3
Daily	994	13
Marijuana (pot, hash)		
Do not use	6524	82
1-2 times a month	674	9
1-2 times a week	326	4
3-5 times a week	209	3
Daily	194	2
Inhalants (glue, aerosols, poppers, nitrous oxide)		
Do not use	7348	93
1-2 times a month	362	5
1-2 times a week	133	2
3-5 times a week	46	.6
Daily	48	.6
Hallucinogens (LSD, acid, PCP, mescaline)		
Do not use	7434	94
1-2 times a month	301	4
1-2 times a week	132	2
3-5 times a week	50	.6
Daily	32	.4
Cocaine/crack (snorted or free-based)		
Do not use	7559	95
1-2 times a month	178	2
1-2 times a week	119	2
3-5 times a week	32	.4
Daily	41	.5

Table 7 (continued)

In the last month how often have you used ...?	n	%
Stimulants (speed, uppers amphetemines)		
Do not use	7522	95
1-2 times a month	184	2
1-2 times a week	117	2
3-5 times a week	46	.6
Daily	47	.6
Misused non-prescription drugs (diet pills, cough syrup, Nyquil)		
Do not use	7395	93
1-2 times a month	321	4
1-2 times a week	116	2
3-5 times a week	63	.8
Daily	45	.6
Depressants/tranquilizers (quaaludes, reds, valium, barbituates, xanax)		
Do not use	7590	96
1-2 times a month	182	2
1-2 times a week	101	1
3-5 times a week	38	.5
Daily	40	.5
Heroin/methadone (horse, H, smack)		
Do not use	7647	96
1-2 times a month	138	2
1-2 times a week	94	1
3-5 times a week	37	.5
Daily	37	.5
Steroids		
Do not use	7658	96
1-2 times a month	116	2
1-2 times a week	88	1
3-5 times a week	46	.6
Daily	39	.5

Alcohol is the most frequently used drug by every group at all grade levels and ages; used at least once or more monthly by 28% of the sample, used at least once a week by 10% of the sample, and used most often on weekends. Tobacco is the second most often used drug, and the most often used daily. Approximately 13% of the sample report daily use of tobacco. Marijuana ranks third, with almost 9% reporting use at least once a month, 4% indicating use at least once a week, 3% indicating use between 3-5 times a week, and 2% indicating daily use.

Inhalants are next in frequency, with approximately 5% reporting use of at least once per month. Both hallucinogens and the misuse of non-prescription drugs (at least once per month) were reported by approximately 4% of the sample. All other categories (cocaine/crack, stimulants, depressants, heroin, steroids) show monthly usage of 2% or less.

In examining the data on age first used, 45% of those who report having used alcohol tried it prior to their high school years. The most common age at which alcohol was first used is junior high (grades 6-8). The majority of students who have tried using alcohol have started by the end of ninth grade. Junior high is also the grade level which most students first try tobacco, with almost 20% of the sample indicating this as the time of first use.

In terms of the age of first use of other drugs, in

general the grades during which students began usage is in high school. Only six percent of the students began using marijuana and seven percent began using inhalants before they entered high school. Between one and two percent of the students began using hallucinogens, cocaine/crack, and/or other illegal drugs before ninth grade.

Student peceptions of their future usage indicated that approximately 15%, or a total of 1177 students are not interested in quitting their use of alcohol, 8% (666 students) are not interested in quitting their use of tobacco, and 7% (581 students) are not interested in quitting their use of marijuana. Those indicating no interest in quitting all other classes of drugs were generally one percent or less, with 132 not interested in quitting their use of hallucinogens, 117 not interested in quitting their use of inhalants, 70 not interested in quitting their use of cocaine/crack, and 85 not interested in quitting their use of other illegal drugs.

In a recent study (Johnston, O'Malley, & Bachman, 1993) conducted at the University of Michigan that was designed to survey substance use nationally among eighth, tenth and twelfth grade students across the United States, it was reported that there was "a sharp rise in marijuana use throughout the country at all grade levels, as well as an increase in the use of stimulants, LSD and inhalants" (p.1). An increase in cigarette smoking was documented in all three

grades. A comparison of the present sample of seniors with seniors in the national survey with respect to percentages of lifetime substance use is presented in Table 8.

Table 8

Comparison of the Sample with the National Student Substance Usage Sample

12th Graders Have you ever used ...?	National 1993	Sample 1993
Alcohol	87%	78%
Cocaine	6%	5%
Depressants/Tranquilizers	6%	6%
Hallucinogens	11%	12%
Heroin/Methadone	1%	2%
Inhalants	17%	16%
Marijuana	35%	33%
PCP	3%	3%
Steroids	2%	2%
Stimulants	15%	9%
Tobacco	62%	51%

It is interesting to note that when we examine the comparative usage rates of most substances, including hallucinogens, inhalants and marijuana, the percentages of lifetime use are strikingly similar betweem the two samples. Some notable differences do exist with respect to use of alcohol, tobacco and stimulants, with sample seniors showing lower percentages of lifetime use compared to the national sample.

Description of the Normative Data Set for the Responses to the Family-of-Origin Scale (FOS)

A total of 7,060 students completed the entire FOS with no missing items. The items were scaled from 1 to 5, with 5 representing the most healthy response and 1 the least healthy response. Thus, the highest possible total score was 70; the lowest possible score was 14. It should be noted that the entire range of scores was obtained in the sample.

Table 9 indicates a breakdown of scores for all cases. The top third of all respondents scored between 56 and 70 on the scale, the middle third scored between 47 and 55, and the bottom third scored between 14 and 46. The overall mean was 51.008 (SD = 11.137). A comparison of the mean scores between males and females show strikingly similar means, along with comparisons between age, year in school, and racial/ethnic backgrounds. These findings and additional crossbreaks by household income and parent demographics are

summarized in Table 10. Results of a reliability analysis yielded a Chronbach's alpha of .9251. Given this finding, a strong case for the instrument having very high internal consistency can be made. It should be noted that a Chronbach's alpha coefficient can be loosely interpreted as a measure of the degree to which scale items are indicators of a unitary underlying factor. Therefore, given the very positive results from the internal consistency reliability analysis, we are in a position to provide some support for the notion of a single factor solution for the FOS.

Table 9

Family-of-Origin Scale Total Distribution

Value	Frequency	Valid Percent	Value	Frequency	Valid Percent
14	12	.2	47	196	2.8
15	1	.0	48	209	3.0
16	4	.1	49	215	3.0
17	5	.1	50	257	3.6
18	21	.3	51	231	3.3
19	9	.1	52	278	3.9
20	13	.2	53	229	3.2
21	9	.1	54	294	4.2
22	22	.3	55	272	3.9
23	20	.3	56	247	3.5
24	26	.4	57	227	3.2
25	20	.3	58	283	4.0
26	35	.5	59	185	2.6
27	29	.4	60	165	2.3
28	31	.4	61	160	2.3
29	42	.6	62	165	2.3
30	51	.7	63	131	1.9
31	32	.5	64	119	1.7
32	40	.6	65	121	1.7
33	48	.7	66	164	2.3
34	74	1.0	67	112	1.6
35	71	1.0	68	125	1.8
36	87	1.2	69	103	1.5
37	83	1.2	70	252	3.6
38	97	1.4			
39	98	1.4			
40	124	1.8			
41	134	1.9			
42	358	5.1			
43	171	2.4			
44	203	2.9			
45	168	2.4			
46	182	2.6			

Mean = 51.008
Standard deviation = 11.137
Range = 56 Minimum = 14 Maximum = 70

Table 10
Demographic Comparisons of Total FOS Scores

	Mean	Standard Deviation	No. of Cases
Entire Population	50.996	11.137	7033
Males	51.494	10.420	3479
Females	50.509	11.778	3554
Entire Population	51.007	11.137	7043
Freshman	52.056	10.955	1835
Sophomore	50.641	11.113	1675
Junior	50.379	11.289	1847
Senior	50.917	11.118	1686
Entire Population	51.027	11.147	7014
13 years or less	51.105	10.988	306
14 years old	52.043	10.937	1483
15 years old	50.879	11.068	1591
16 years old	50.478	11.205	1804
17 years old	51.097	11.333	1523
18 years or more	49.678	11.136	307
Entire Population	51.025	11.139	6992
African American	51.282	9.894	124
Indian, Alaskan	48.383	11.361	47
Caucasian	51.334	11.157	5447
Hispanic, Latino	49.745	10.578	546
Asian American	49.553	11.498	593
Other	50.945	11.200	235
Entire Population	50.994	11.118	6868
Under $17,000	48.940	10.704	448
$17,000-30,000	48.690	11.438	785
$30,000-45,000	50.374	11.100	2216
$45,000-70,000	51.874	10.676	2097
Over $70,000	52.702	11.370	1322
Entire Population	51.010	11.127	7049
Both natural parents	51.934	10.863	4959
1 natural/1 step	48.377	11.551	666
1 natural parent only	49.670	11.171	835
1 nat./1 not step	46.093	11.106	161
Mother/Father pt.time	50.111	9.082	99
Adoptive parents	47.570	13.598	107
Foster parents	58.615	8.332	13
Relatives	47.378	11.190	98
Friends	44.824	13.603	17
Agency	50.822	12.908	45
Other	49.286	10.815	49

Results relating to Testing Null Hypothesis #1

Hypothesis #1: Each item on the brief form of the Family of Orign Scale does not load on a single factor.

Table 11 provides a summary description of the model factor loadings for each item. In addition, standard errors and test statistics (z scores) are presented for each parameter estimate. Only 3 of the 14 parameter estimates were found to be statistically significant at the .05 level. This finding represents a relatively poor fit for the model.

Further evidence offered in support of a relatively poor fit of the model was documented in the relatively high non-standardized and standarized residuals (.5074 and .4086, respectively). Finally, an examination of goodness of fit parameters also indicated a relatively poor fit. The Chi square value was found to be 63291.896 (p <.001, 77 df). Because of the possible sensitivity of the Chi square statistic to the large sample size, additional indices of fit were computed. The findings related to the Bentler-Bonett normed fit index (.00), the Bentler-Bonett non-normed fit index (-.182), and the comparative fit index (.00) all indicate poor agreement between the hypothesized covariance structure among items and the sample values.

To confirm a previously hypothesized factor solution, a single factor confirmatory analysis was run using the EQS program. In this analysis all items were hypothesized to load on a single underlying construct. Table 12 presents

Table 11

Null Model Factor Loadings

Item #	Parameter Estimate	Standard Error	Z
1	.002	4.356	.000
2	.002	5.861	.000
3	.500	.019	26.639*
4	.250	.038	6.654*
5	.002	5.542	.000
6	.500	.021	24.249*
7	.002	5.517	.000
8	.002	6.173	.000
9	.125	.070	1.174
10	.031	.325	.096
11	.002	4.736	.000
12	.002	5.194	.000
13	.002	4.097	.000
14	.002	4.684	.000

Chi square = 63291.896 77 df $p < .001$

Bentler-Bonett Normed Fit Index 0.000

Bentler-Bonett Nonnormed Fit Index -0.182

Comparative Fit Index 0.000

Table 12

Single Factor Model

Item #	Parameter Estimate	Standard Error	Z
1	.686	.011	65.289*
2	.812	.012	66.994*
3	.719	.011	65.063*
4	.822	.011	77.923*
5	.851	.011	74.153*
6	.647	.012	53.853*
7	.945	.011	86.507*
8	.677	.013	51.717*
9	.843	.010	84.723*
10	.906	.011	84.797*
11	.808	.011	76.883*
12	.486	.012	39.121*
13	.617	.010	59.281*
14	.869	.010	86.184*

Chi square =	7633.812	77 df	p < .001
Bentler-Bonett Normed fit index	0.879		
Bentler-Bonett Nonnormed fit index	0.859		
Comparative Fit	0.880		

the factor loadings, standard errors, and test statistics for each variable, along with the fit indices. All parameter estimates were found to be significant at the .05 level. The factor loadings ranged between .48 and .94 and the standard errors were less than .02.

Additionally, non-standardized and standardized residuals (.0483 and .0378 respectively) were found to be lower than those observed in the null model. These findings suggest a better fit for the single factor model. A Chi square of 7633.812 ($p < .05$, 77 df) was found to be significant. There does appear to be significant variation between the hypothesized single factor model and the observed covariance structure in the sample. Once again, it should be noted that the Chi square statistic is particularly sensitive to the large sample size. In contrast, alternative fit indices which are relatively insensitive to the effects of large sample size, such as the Bentler-Bonett normed (0.879) and non-normed (0.859) fit indices, and the comparative fit index (0.880) all suggest a relatively good fit for the single factor model.

Taken together with the internal consistency analysis, results of the confirmatory factor analysis strongly suggest that the null hypothesis (i.e., each item on the proposed brief form of the Family of Origin Scale loads independently on a unique factor) should be rejected in favor of the alternative hypothesis (i.e., all 14 items load on a unitary

dimension). This unitary dimension may perhaps be best characterized as an individual's perceived overall satisfaction with his or her family of origin.

Results relating to Testing Null Hypothesis #2

Hypothesis #2: There is no relationship between perceived family of origin health and patterns of substance use by adolescents.

Pearson Product Moment Correlations were calculated using pair-wise deletions between FOS scores and three composite variables which measure overall total substance use, substance usage in the past 30 days, and problem substance use. A summary of these results is reported in Table 13. In order to compute correlations between overall lifetime usage patterns and FOS scores, a total use score (USETOT) was created by summing subject's responses to items 37-52, excluding items 40 and 47 (non-existent drugs). A significant interrelationship was found between the FOS total scores and USETOT, with higher levels of overall usage related to lower overall FOS scores. Approximately 7% of the variance in USETOT was accounted for by the FOS scores.

A second composite variable was created by summing items 120-130 (FREQTOT) which surveyed substance use in the last 30 days. This variable also correlated significantly with FOS total scores. FOS scores accounted for approximately 4% of the variance.

Table 13

Relationships Between Family-of-Origin Scale, Total Use, Frequency of Use, and Problem Use

	FOS	No. of Cases
USETOT	-.2578*	6623
FREQTOT	-.1857*	6390
PROBUSE	-.2058*	6536

Note. USETOT = total overall usage; FREQTOT = usage in past 30 days; PROBUSE = problem usage

*significant at .05

Finally, five questions at the end of the survey were identified which specifically addressed behavioral sequalae of problem substance use. Examples of these questions are: "I have been under the influence of alcohol or drugs while in class"; "I have been 'hung over' in class during school"; "Using drugs or alcohol has interferred with my homework." Responses to these questions were summed to yield a problem use score (PROBUSE). Significant correlations were found between PROBUSE and FOS with higher levels of problem use being associated with lower levels of perceived family of origin health.

Thus, although the obtained corelations were relatively small in magnitude, they were found to be statistically significant. Therefore, Null Hypothesis #2 was rejected in favor of the alternative hypothesis. That is to say that

there were significant relationships found between perceived family of origin health and patterns of substance use by adolescents.

Results related to Testing Null Hypothesis #3

Hypothesis #3: There is no relationship between patterns of substance use and protective factors, as measured by grades and student involvement in extracurricular activities.

Table 14 summarizes the correlations obtained between student grades and the three composite variables described above. Significant Pearson correlations were obtained for all comparisons. Behavioral sequalae of problem use accounted for approximately 5% of the variance in grades. Total substance use accounted for approximately 7% of the variance in grades, and current substance use accounted for approximately 8% of the variance in grades. Of additional interest was the obtained correlation between FOS total scores and grades (r= -.2422), suggesting that lower levels of perceived family of origin health correlated significantly with poorer grades.

Table 14

Relationships Between Patterns of Substance Use and Grades

	Student Grades	
	Correlations	# of cases
USETOT	.2811*	7331
FREQTOT	.2677*	7254
PROBUSE	.2280*	7331
FOSTOT	-.2422*	6864

Note. USETOT = total overall usage; FREQTOT = usage in past 30 days; PROBUSE = problem usage; FOSTOT = Family-of-Origin total score.

* p = .05

Finally, one item (# 97) which surveyed after school activities was used as a measure of a protective factor. This question was directed at determining a respondent's level of participation in a wide variety of extracurricular activities such as sports, student government, music and drama, etc. Responses to this item were artificially dicotomized to represent participation in any extracurricular activity versus no participation. Independent t-tests were then computed using this dicotomized variable as an independent variable and the three patters of use variables described above (USETOT, FREQTOT and PROBUSE) as dependent variables. An additional t-test was also computed across categories (protective factor or no protective factor) using the FOS total score as a dependent variable. Significant differences were obtained

on all dependent measures. Thus, students who engaged in after school activities had significantly lower total use scores, lower current substance use scores, and less problem behavior than those who engaged in no activities. In addition, those students involved in extracurricular activities had significantly higher FOS total scores, suggesting relatively higher levels of overall perceived family of origin health for these students.

Table 15

Relationships Among Protective Factors, FOS Scores and Patterns of Substance Use

	n	M	SD	t
FOSTOT				
No protective factor	67	45.6	11.7	4.54*
Protective factor	3537	51.6	10.7	
USETOT				
No protective factor	75	25.1	10.3	4.02*
Protective factor	3819	20.3	5.8	
FREQTOT				
No protective factor	71	16.6	8.2	3.48*
Protective factor	3740	13.2	4.7	
PROBUSE				
No protective factor	65	8.5	1.7	4.37*
Protective factor	3600	9.5	1.1	

Note. FOSTOT = Family-of-Origin total score; USETOT = total overall usage; FREQTOT = usage in past 30 days; PROBUSE = problem useage

* = sig. at .05

Taken together, the results from the correlational analyses and the t-tests favor the rejection of Null Hypothesis #3. That is to say that there appear to be small but significant relationships among protective factors identified as grades and extracurricular activities, and outcome problem use variables, as well as the total FOS scores.

CHAPTER V

DISCUSSION

This chapter presents a summary of the study, discussion of the data, limitations of the study, and implications for educators and clinicians. Recommendations for future research are also discussed.

Summary of Findings

The overall purpose of this study was to extend previous research findings in the area and establish a large (n = 8,651) normative adolescent data set for a brief form of the Family-of-Origin (FOS) scale. In addition, current patterns and trends in substance use were systematically assessed among this sample. Finally, relationships among patterns of substance use, perceived family of origin health, and protective factors were examined. Developmental and family systems theories were used to provide a conceptual framework for understanding adolescent substance use and the importance of family relationships. The following research questions were addressed:

1. What are the general patterns of substance use in a large sample (n = 8,651) of adolescents?

2. What are the distribution characteristics and normative data for a population of adolescents using a brief

form of the Family-of-Origin scale (FOS)?

3. Is a brief form of the FOS internally consistent? Does it conform to a previously hypothesized factor structure?

4. Are there significant relationships between perceived family of origin health and patterns of use by adolescents?

5. Are there significant relationships between patterns of substance use and select protective factors (defined as factors believed to provide resilience to risk)?

A sample of 8,651 high school students attending a suburban school district participated in the study. Excluding data from students who responded affirmatively to the use of distractor (fictitious) drugs, the final sample included 8,198 students. A 159 question Student Substance Abuse Survey was administered, which was designed to assess various patterns of initial and continued substance use, as well as demographic and family variables. A subset of 14 items from the original FOS was included in the survey.

The reported patterns of substance use in this sample were found to be similar to the national averages, as documented in the latest Monitoring the Future Study (Johnston, O'Malley & Backman, 1993). Among twelfth graders, notable differences found across studies were the reported lower percentages of lifetime use of alcohol (78%

vs. 87%), tobacco (51% vs. 62%) and stimulants, (9% vs. 15%). Compared to the results of a survey conducted in the same school district in 1990 (Brenner, 1991), there were slight differences in trends of usage of various substances, with somewhat lower usage of alcohol, cocaine and other narcotics, and somewhat higher usage of marijuana and hallucinogens. While use of some of these substances showed statistically significant changes, due to the large sample size, it is questionable whether practical significance exists. Overall, trends in usage remain similar to the earlier 1990 survey, and for the most part parallel that of the national survey (1993).

The question arises as to whether the incidence of sensitive behaviors such as the use of drugs are honestly reported. While there is no direct, totally objective validation of the present survey findings, there is a considerable amount of inferential evidence that exists to strongly support the assumption that self-report questions produce largely valid data (O'Malley, Bachman & Johnston, 1983). First, in comparing the findings of the present survey to both the previously administered (1990) survey and University of Michigan National Survey (Johnston, et al., 1993) we find a highly consistent data set. This suggests very good reliability--a necessary condition for validity. Second, there is a high degree of consistency among related questions measuring similar usage patterns within the

survey. Third, the respondents reports of usage by their friends--about which they would presumably have less reason to distort--were found to be highly consistent with the self-reported use results. Fourth, although the scope of this study did not include analysis of questions which surveyed attitudes, results of the school district's analysis indicated that self-reported use related in consistent ways to a number of other attitudes, behaviors, and beliefs (Begitschke, et al., 1994). These consistent findings provide some evidence with respect to supporting the construct validity of the instrument. Finally, an attempt was made to eliminate from the data set those respondents who were possibly faking their responses to the survey. For example, data sets were deleted for those students who responded affirmatively to questions about fictitious drugs. Procedures were implemented to insure that students felt that their confidentiality was protected. Similar to the reports crafted by Johnston (1993), while some reporting bias may still exist, it is likely to be in the direction of underreporting.

That said, the data set collected in the study provide us with a large non-clinical data base for a brief form of the adolescent version of the Family-of-Origin Scale. Similar to normative samples using the complete FOS, use of the brief FOS appears adequate with respect to its ability to discriminate among subjects (the top third of all

respondents scored between 56 and 70 on the scale, the middle third scored between 47 and 55, and the bottom third scored between 14 and 46). In addition, the entire range of scores was obtained. The overall mean was 51.008 (SD = 11.137). Mean score comparisons between males and females show strikingly similar means, along with comparisons among age, year in school, and racial/ethnic background.

While the sample size is large and representative of a number of family constellations, ethnic minorities are somewhat under-represented. Given that the literature suggests non-dominant culture groups may exhibit unique patterns of family functioning (McGoldrick, Pierce & Giordano, 1983), the development of separate norms for different ethnic populations would be valuable. In addition, estimates of family income tend to skew this sample toward the upper income levels. Different norms might be generated with samples which more closely represent lower to moderate income levels.

Based on the findings reported above, Null Hypothesis 1 (i.e., each item on the brief Family-of-Origin scale does not load on a single factor) was rejected. That is to say that the proposed brief form of the FOS shows high internal consistency, with a Cronbach's alpha of .9251. Previous research with the full FOS has established internal consistency coefficients ranging from .75 to .96 (Hovestadt, et al., 1985; Schudy, et al., 1991; Manley, et al., 1990).

The results obtained here are similar to those reported by Gavin and Wamboldt (1992); in their factor analytic study these authors reported an internal consistency coefficient of .94 among a brief subset of items which accounted for 40% of the variance of the total scale. Results of the internal consistency reliability analysis confirm prior findings in a different population and provide preliminary support for a single factor interpretation.

Several investigators (Mazer, et al., 1990; Lee, et al., 1989; Gavin & Wamboldt, 1992) have questioned the assumed multidimensionality of the FOS and suggested that a single factor accounts for a substantial portion of the variance. Assuming this single factor solution, there is evidence that a smaller subset of items could be used to measure overall perceived family of origin health. The advantages of a brief instrument, most notably speed and ease of administration, in both research and practice, seem clear. Although item content varied slightly among previous factor studies, there have been a number of shared entries in all solutions to support the notion that the factor taps similar psychological content. While not addressing the multidimensionality controversy, the results reported here provide support for the idea that this subset of items may be useful in assessing perceived overall family health.

The results of the confirmatory factor analysis also support use of a brief scale in addressing overall perceived

family health. While previous investigators have suggested the single factor solution among adult populations, the findings of the present study provide some support for use of the brief form of the scale in an adolescent population.

It is important to keep in mind that the current form, like the original FOS, was not designed to distinguish between objective-factual or interpretive-subjective views of the family of origin. However, the worth of an individual's view or perception of their satisfaction with important relationships, while not the only indicator of the relationship, is nonetheless an important and accessible construct to assess for both research and clinical practice. The importance of the cognitive appraisal and evaluation that the adolescent makes of family functioning is highlighted in a recent study by Cumsille and Epstein (1994). These authors investigated relationships among adolescent depressive symptoms and several measures, including perceived family satisfaction and social support from friends and family. Results of this study indicated that the strongest predictor of depressive symptoms was adolescents' reported degree of satisfaction with family functioning. In addition, many measures have been designed which tap an individual's perceptions of significant relationships (Moos & Moos, 1986; Bengston & Schrader, 1982; Spanier, 1976). These instruments are widely used in both family research measurement and in therapeutic practice. An

important direction for future research would be to investigate relationships between observed interactional processes of families and self-report measures, such as the FOS. In this regard, the use of a relatively brief instrument such as the proposed FOS may be a useful tool in assessing perceived family satisfaction.

Null hypothesis 2 (i.e., there is no significant relationship between perceived family of origin health and patterns of substance use by adolescents) was also rejected. There were significant relationships found between perceived family of origin health and various measures of patterns of use in this sample. Significant correlations were obtained between overall usage patterns as well as frequency of usage in the past thirty days, with higher levels of overall usage and more frequent usage in the preceeding thirty days both related to lower levels of perceived family health. Additionally, self-reported indicators of problem usage corresponded to lower levels of perceived family health. These findings are supported by previous studies which have found significant differences on the nonretrospective full form of the FOS between adolescents in treatment for substance abuse and non-clinical samples (Searight, et al., 1991; Manley, Borduin & Searight, 1993).

In their longitudinal study of the relation between psychological characteristics and drug use, Shedler and Block (1990) reported that adolescents who used drugs

frequently showed a distinct personality syndrome marked by interpersonal alienation, poor impulse control, and manifest emotional distress. These researchers suggested that these psychological characteristics could be traced to the earliest years of childhood and relate in large part to the quality of parenting received. It is interesting to note that in this longitudinal study, parental quality was assessed by direct observations during a joint assessment procedure (Shedler & Block, 1990; Gjerde, 1988) rather than by self-report measures. Shedler & Block concluded that problem drug use is a symptom, not a cause, of personal and social maladjustment. Efforts at prevention are therefore misguided to the extent that they focus on symptoms, rather than the psychological syndrome which may underlie drug abuse.

Null hypothesis #3 (i.e., there is no significant relationship between patterns of substance use and protective factors) was also rejected. Statistically significant relationships were found for comparisons of student grades and all measures of substance usage (USETOT, FREQTOT, and PROBUSE), with lower grades associated with higher overall usage, more frequent current usage, and more reported problem behaviors. The correlations between FOS total scores and grades were also found to be significant. This finding indicates that lower levels of perceived family of origin health are associated with poorer grades. It is

important to note that because the surveys were anonymous, poor grades do not reflect actual grades but respondents' own reports or perceptions of their school performance.

While significant relationships between students' reports of participation in extracurricular activities and various usage patterns were obtained, as well as significant relationships between FOS scores and extracurricular activities, these relationships are relatively weak due to the fact that approximately one-half of the students did not respond to the question (#97) about student participation. One explanation for this is that the question may have been confusing and/or ambiguously worded. In addition, a multitude of possible non-school sponsored activities (e.g., outside music or dance lessons, etc.) was not included. The assessment of activities as a possible protective factor by use of this question may be of questionable value. Further research into the role of protective factors and their impact on substance use and abuse is another important area to explore in the future.

Other Findings

Several other noteworthy findings emerged from this survey. Approximately 49% of the sample reported that they had one or more relatives (parents, brothers and sisters, grandparents, aunts, uncles or cousins) with a history of alcoholism and/or drug addiction. The results of several studies (Cotton, 1979; Midanik, 1983; Sher, 1987) indicate

that the frequency of alcoholism is greater in alcoholic families compared to nonalcoholic families. Perkins and Berkowitz (1991) found significantly greater problem drinking by college students who reported having a parent or grandparent diagnosed or treated for alcoholism.

In response to survey item (#114), "How often did you feel like this in the past year (depressed/lonely/empty)", almost 18% of the sample population responded "often", and approximately 6% responded "always." Striking similarities in these percentages are found across studies. In a recent article on depression in adolescence, Petersen et al. (1993) reviewed 30 studies which assessed depressed mood based on nonclinical samples. In these studies, the frequency of sad, unhappy or depressed mood based on a single item by the adolescents' self-reports reached between 20-30% for boys and between 25-40% for girls. The findings of several studies have indicated that there are strong relationships between depresssed mood, substance abuse, and suicidal ideation (Block & Gjerde, 1990; Kandel, et al., 1991; Levy & Deykin, 1989). Further examination of the process linking substance use, depression, and suicide is needed to examine hypotheses differentiating intent to self-medicate from suicidal intent.

Results of the national survey (Johnston, 1993) indicate that although the rates of smoking for seniors have been fairly steady for nearly a decade, in 1993 the rate of

daily smoking rose significantly in all grade levels surveyed--eighth, tenth, and twelfth grade. A comparison of the percentages of students in the current population reporting daily use of tobacco also shows a slight increase (2%) as compared to the previous survey (Brenner, 1991).

Responses to questions regarding student attitudes toward substance usage show in general, that the majority of students demonstrate socially acceptable attitudes (i.e., "I have fun without drinking or using drugs"). Those students who use alcohol or drugs feel in control of their usage because they set limits on themselves. A comparison with the previously administered survey (Brenner, 1991) shows few changes in attitudes overall, with some very slight increases in percentages of students indicating that their usage of drugs is sometimes or often out of control. Attitudes reported on students perceptions of peer usage of illicit substances showed a small change over the previous survey in response to a question about the frequency of close friends who get drunk or high daily. This percentage increased from 3% in 1990 to 8% in 1993.

According to the latest national survey, Johnston and his colleagues (1993) see a shift in underlying attitudes and beliefs in a direction more favorable to drug use. These authors note "a fair drop in the proportions seeing marijuana use as dangerous at any level, even regular use" (p.3). They also noted that the perceived risks associated

with crack and powdered cocaine dropped at all three grade levels. While the authors note little change in the actual use of either crack or powdered cocaine in 1993, these investigators fear that these changes in beliefs and attitudes could predict an increase in their use, as well.

Limitations of the Study

The study used a sample of convenience. Since all students in the district were asked to be a part of the study, no consideration can be claimed for random sampling. Inability to provide firm conclusions and to make generalizations from the data set are two major limitations of the sample. Additionally, participation was voluntary, and no attempts were made to include absentees. The majority of respondents did not answer every question. Given this situation, it cannot be determined whether the experiences of those not taking the survey due to refusal or absenteeism, as well as those returning partially completed surveys, differed significantly from the sample. Also, given the large sample size and many dependent measures, many of the significant correlations need to be interpreted with some caution.

The study was also limited with respect to design. Much of the information is essentially descriptive in nature, and it is impossible to make causal statements. Because this study was part of a follow-up study by the school district, space limitations were present, and much of

the instrumentation was pre-established. Further, only bivariate correlations were used in the analyses of the data sets. Thus, an exploration of the unique and independent contribution of each of the variables was not done. Because of large number of missing responses to the item querying extracurricular activities, the protective factor variable was a relatively weak variable.

The data collected in the study consisted of a self-report data set; no external, corroborative data were utilized. The extent to which distortion due to selective and/or inaccurate reporting may exist in this study is unknown. However, as noted previously by O'Malley et al. (1983) and others, (Johnston et al. 1992; Cotton, 1979) with respect to substance usage, any bias which exists tends to be in the direction of underreporting. In addition, some researchers (Bloom, 1985; Sigafoos, Reiss, Rich, & Douglas, 1985) have questioned the accuracy of self-report instruments in measuring family functioning as compared to observational methods. However, the overall purpose of this study was to assess subjects' individual perceptions of events in their current family experiences. As previously noted, the importance of this subjective appraisal seems certain.

Implications for Educators and Clinicians

The findings of this study have several implications for educators and counselors, as well as for future

researchers. Overall, patterns and trends of substance use reported in the sample largely parallel that of national surveys. This suggests that continued efforts at identifying those at risk and clarifying variables which contribute to substance abuse is an important effort to guide both prevention and intervention efforts for this population. There are indications in the latest national survey (Johnston, et al., 1993) that student attitudes about the perceived risks of drug use are softening somewhat. Future studies assessing use patterns and trends should continue to monitor and examine these changes in attitudes concerning substance use.

Based on the findings of this study, for purposes of assessment of perceived global family functioning, the proposed short form of the FOS may be a useful tool with adolescents. Counselors and educators may find it helpful as a brief screen in identifying students potentially at risk for a variety of problems, including substance abuse. Once identified, both individual and/or family therapy may help explore conflicted feelings among family members and be instrumental in facilitating sensitive and empathic parenting.

Efforts at drug education need to include a keen awareness of the various psychological factors that appear to underlie problem drug use. Some of these factors include conflicted family relationships, as well as poor self-

esteem, and other ineffective interpersonal relationships. Programs that assist in promoting involvement and committment to meaningful goals should also be incorporated into drug education curicula.

Recommendations for Future Research

The focus of this research project was threefold: (1) to extend previous research and establish normative adolescent data for a brief form of the FOS; (2) to assess current trends in substance usage among a large population of adolescents; and (3) to examine further relationships between family of origin health, patterns of use, and protective factors. Overall findings indicated that trends and patterns of substance use in this population largely parallel that of national surveys. The results also suggest that a brief form of the FOS does conform to a previously hypothesized single factor solution, and may be a useful brief instrument for measuring overall perceived family satisfaction in this population. Finally, significant interrelationships were found among perceived family of origin health, patterns of use and protective factors.

A recurrent concern voiced by researchers is a tendency to bypass the step of collecting descriptive and qualitative data that reflect adolescents' organization of their own experiences (Zaslow & Takanishi, 1993). Further studies which investigate adolescents' own attitudes and beliefs about substance abuse and other health compromising

behaviors may enhance our understanding of both normal development, as well as expaning our scope of preventions and interventions.

Although the sample size in the study was large and included minority populations, minorities were underrepresented in the sample. Establishing normative data with a wider range of adolescent populations would be valuable. Also, while the FOS demonstrated a high level of internal consistency, it is important to note that test-retest reliability was not established. Future research should include assessment of this important characteristic. Additionally, future researchers might generate a composite factor score for adolescents using their own factor solution. This composite factor score might be used as either a criteria or a predictor variable based on the hypothesis of the study. Future investigators might also attempt to explore possible causal mechanisms using the FOS, patterns of drug use and other variables through the use of causal modeling, such as path analysis. Studies which attempt to link self-reports of family functioning to observed interactional processes would also be valuable.

Finally, further research is needed related to examining the influence of protective factors leading to successful adaptation of high-risk youth. Citing evidence that invovlement in one of four major problem behaviors (early sexual involvement, school failure, delinquency, and

substance abuse) is predictive of involvement in one or more of the others (Dryfoos, 1990), Zaslow and Takanishi (1993) call for broad research which assesses level of involvment with all of the major problem behaviors, as well as the ability to search for an interrelated cluster of health-supporting behaviors among adolescents. Such broad-based research, and the integration of pertinent findings into existing theories of both adolescent development and the larger scope of human behavior, are perhaps the most serious challenge to future researchers.

APPENDIX A

STUDENT SUBSTANCE ABUSE SURVEY

TOWNSHIP HIGH SCHOOL DISTRICT 214/
FIGHTING BACK

STUDENT SUBSTANCE ABUSE SURVEY

Directions: The following survey was designed to gain information about substance usage in District 214 high schools. This information is TOTALLY CONFIDENTIAL. The results will only be reported at the district level. (Do not put your name on the answer sheets.)

Please read each question carefully. Answer the question as it applies to you. We are interested in and would appreciate your honest answers.

Please use a #2 pencil and make heavy black marks that fill the circles completely. Erase cleanly any answer that you wish to change. Please turn the page to start.

1. What is your sex?

   A. Male
   B. Female

2. What year in school are you?

   A. Freshman
   B. Sopohomore
   C. Junior
   D. Senior

3. How many years have you attended this school?

   A. One year
   B. Two years
   C. Three years
   D. Four years
   E. Five years

4. How old were you on your LAST birthday?

   A. 13 years old or less
   B. 14 years old
   C. 15 years old
   D. 16 years old
   E. 17 years old
   AB. 18 years old or more

5. What is your racial/ethnic background (choose only one)

   A. African-American, Black
   B. American Indian, Alaskan Native
   C. Caucasian, White
   D. Hispanic, Latino
   E. Asian-American, Oriental, Pacific Islander
   AB. Other

6. In which District 214 special program are you currently participating (choose only one)
   A. English as a Second Language - ESL
   B. Hearing Impaired
   C. Individualized Resource - IR
   D. MEC/Nipper
   E. Mildly Mentally Impaired - MMI
   AB. Forest View Alternative School - STEP
   AC. Talented and Gifted - TAG
   AD. Visually Impaired
   AE. Young Adult Program - YAP
   BC. None

7. How many hours per week are you currently employed in a paying part-time job outside of your home?

A. 0 or only occasional jobs
B. 1 to 10 hours
C. 11 to 20 hours
D. 21 to 30 hours
E. More than 30 hours

8. If you work, what is your <u>main</u> reason for working? (answer only one)

A. Money for clothes, dates, food, etc.
B. Save money for college
C. Money for car
D. Money to help support family
E. To earn school credit (co-op ed) and/or prepare for future work

9. What do you estimate to be the combined yearly income level of your household?

A. Lower (under $17,000)
B. Lower middle ($17,001 to $30,000)
C. Middle ($30,001 to $45,000)
D. Upper middle ($45,001 to $70,000)
E. Upper (greater than $70,000)

10. With whom do you currently live?

A. Both natural parents
B. 1 natural/1 stepparent
C. 1 natural parent only
D. 1 natural parent & someone who is not a stepparent
E. My mother part of the time & my father part of the time
AB. Adoptive parents
AC. Foster parents
AD. Relatives
AE. Friends
BC. Agency
BD. Other

11. Which of the following best describes the employment of your parent(s) or guardian(s) with whom you live?

A. Two parents/guardians work.
B. Male parent/guardian works.
C. Female parent/guardian works.
D. No one works.
E. I live at an agency
AB. Other

12. What is your family history of alcoholism or drug addiction for parents, brothers and sisters, grandparents, aunts, uncles and cousins?

A. No relative have been alcohol or drug addicted.
B. One relative has been alcohol or drug addicted.
C. Two relatives have been alcohol or drug addicted.
D. Three or more relatives have been alcohol or drug addicted.
E. Don't know.

13. A. They know of my drug/alcohol use.
B. They know a little of my drug/alcohol use.
C. They don't know anything about my drug/alcohol use
D. They know that I don't use drugs/alcohol.

14. How would your parents/guardians feel about your using alcohol?

A. They approve of it.
B. Don't approve, but they tolerate it.
C. Don't approve, and don't tolerate it.
D. I don't know how they feel.

15. How would your parents/guardians feel about your using marijuana?

A. They approve of it.
B. Don't approve, but they tolerate it.
C. Don't approve, and don't tolerate it.
D. I don't know how they feel.

16. How would your parents/guardians feel about your using other drugs (cocaine, acid, speed)?

A. They approve of it.
B. Don't approve, but they tolerate it.
C. Don't approve, and don't tolerate it.
D. I don't know how they feel.

17. How would your parents/guardians feel about your using tobacco?

A. They approve of it.
B. Don't approve, but they tolerate it.
C. Don't approve, and don't tolerate it.
D. I don't know how they feel.

Does the female head of the household (i.e., mother, stepmother, female guardian) use any of the following at least once or twice a week? Please use the key below.

KEY:

A = Yes
B = No
C = Don't know
D = No female head of household

18. Alcohol (beer, wine, hard liquors, mixed drinks)
19. Prescription drugs
20. Tobacco (cigarettes, cigars, chew, etc.)
21. Cocaine or crack
22. Marijuana
23. Other illegal drugs (depressants, stimulants, PCP, heroin, other narcotics or pain killers)

Does the male head of the household (i.e., father, stepfather, male guardian) use any of the following at least once or twice a week? Please use the key below.

KEY:

A = Yes
B = No
C = Don't know
D = No male head of household

24. Alcohol (beer, wine, hard liquors, mixed drinks)
25. Prescription drugs
26. Tobacco (cigarettes, cigars, chew, etc.)
27. Cocaine or crack
28. Marijuana
29. Other illegal drugs (depressants, stimulants, PCP, heroin, other narcotics or pain killers)

30. What would your parents/guardians most likely do if they found out you were planning to attend a party where they suspected alcohol or drugs might be present? (choose all that apply)

A. They would call the host parents.
B. They would call the school or police.
C. They would forbid me from attending.
D. They would caution me but let me attend.
E. They would do nothing.
AB. None of the above.

31. When you go home after school, who is the oldest person most likely to be there?

A. Parent/guardian
B. Other relative
C. Older brother/older sister
D. Younger brother/younger sister
E. Other adult
AB. No one

32. What activity best describes what you usually do immediately after school? (choose only one)

A. Sports
B. School organized activities (other than sports)
C. Community-organized activities
D. Job
E. Watch TV/listen to music
AB. Homework
AC. Hang out with friends
AD. Home duties/ chores
AE. Sleep
BC. Other

33. I feel my drinking is (choose only one):

A. I don't drink.
B. No problem because I set limits on myself.
C. Sometimes out of control.
D. Often out of control.

34. I feel my drug use is (choose only one):

A. I don't use drugs.
B. No problem because I set limits on myself.
C. Sometimes out of control.
D. Often out of control.

35. In general, how often do your close friends get drunk or high on drugs?

A. Never
B. Seldom
C. Once or twice a month
D. Once or twice a week
E. Almost daily

36. Thinking realistically, which of the following do you think you will be doing after you GRADUATE from high school? (choose only one)

A. Obtain a full-time or part-time job.
B. Operate a farm or business
C. Serve in the armed forces
D. Attend a vocational or technical school
E. Attend a college or university
AB. Care for a home/family
AC. Other
AD. Undecided

How often have you used the following? Please use the key below.

KEY:

A = Never
B = 1-2 TIMES
C = 3-10 TIMES
D = 11-20 TIMES
E = 21+ TIMES

37. Alcohol (e.g., beer, wine, wine coolers, hard liquor, mixed drinks
38. Chewing tobacco (e.g., dip, chew)
39. Cocaine (snorted or free-based)
40. Cognadil (freak, hose, flock, skud)
41. Depressants/tranquilizers (e.g., quaaludes, barbituates, reds, valium, xanax, librium)
42. Hallucinogens (e.g., LSD, acid, mushrooms, mescaline)
43. Heroin/methadone (e.g., horse, H, smack)
44. Inhalaants (e.g., glue, gasoline, aerosols, whiteout, poppers, nitrous oxide)
45. Marijuana (e.g., pot, hash)
46. Misuse of non-prescription drugs or products (e.g., diet pills, cough syrup, Nyquil, Vivarin, No-doz, laxatives)
47. Orthrotoxamine (breeze, zephyr, bus, click)
48. Other narcotics (e.g., opium, darvon, codeine, demerol)
49. PCP (angel dust)
50. Steroids
51. Stimulants (e.g., speed, uppers, amphetamines)
52. Tobacco (e.g., cigarettes, cigars)

How old were you when you tried each of the following? Please use the key below.

KEY:

A = Never
B = Elementary (K to 5th grade)
C = Junior High (6 to 8th grade)
D = Grade 9
E = Grade 10
AB= Grade 11
AC= Grade 12

53. Alcohol (beer, wine, etc)
54. Cocaine, crack
55. Hallucinogens (LSD, PCP, etc.)
56. Inhalants (glue, gasoline, aerosols, whiteout, poppers, nitrous oxide)
57. Marijuana
58. Tobacco (cigarettes, cigars, chew, dip, etc.)
59. Other illegal drugs (depressants, stimulants, heroin, other narcotics or pain killers)

What is your history of usage regarding the following? Please use the key below.

KEY:

A = I never tried it.
B = I have experimented (used no more than a few times).
C = I used regularly, but have now quit.
D = I tried to quit, but started again.
E = I haven't quit, but have been thinking about it.
AB = Not interested in quitting.

60. Alcohol (beer, wine, etc)
61. Cocaine, crack
62. Hallucinogens (LSD, PCP, etc.)
63. Inhalants (glue, gasoline, aerosols, whiteout, poppers, nitrous oxide)
64. Marijuana
65. Tobacco (cigarettes, cigars, chew, dip, etc.)
66. Other illegal drugs (depressants, stimulants, heroin, other narcotics or pain killers)

Following are some statements about drugs and alcohol. How much do you agree with each of the statements below? Please use the key below.

KEY:

A = Strongly Agree
B = Agree
C = Neutral
D = Disagree
E = Strongly Disagree

67. At parties or other social events, I have fun without drinking or using drugs.

68. People who drink alcohol or use drugs are generally more mature and grown up.

69. Drinking has interfered with my school work.

70. I think that teenagers who <u>do not</u> get drunk or use drugs usually have fun.

71. There isn't much to do, so I might as well get drunk or use drugs.

72. Getting drunk or using drugs will lead to a good time.

Following are some statements about how families communicate. How do these apply to the way your family of origin (the family with which you spent most of your childhood years) functions?
Please use the key below.

KEY

A = Strongly Agree
B = Agree
C = Neutral
D = Disagree
E = Strongly Disagree

73. My parents encourage family members to listen to one another.

74. My parents openly admit when they are wrong.

75. My family is receptive to the different ways various family mmbers view life.

76. My parents encourage me to express my views openly.

77. In my family, I feel free to express my own opinions.

78. The atmosphere in my family is cold and negative.

79. In my family, I feel that I can talk things out and settle conflicts.

80. I find it difficult to express my own opinions in my family.

81. We usually are able to work out conflicts in my family.

82. I find it easy in my family to express what I think and how I feel.

83. My family members usually are sensitive to one another's feelings.

84. My parents discourage us from expressing views different from theirs.

85. In my family, people take responsibility for what they do.

86. I think of my family as being warm and supportive.

Following are some reasons people might begin to use drugs or alcohol. What is your opinion?
Please use the key below.

KEY:

A = Not True
B = Somewhat True
C = Generally True
D = Always True
E = Don't Know

87. To impress others
88. To be one of the group.
89. To feel more like an adult.
90. To feel better.
91. To forget about problems.
92. To be different from their parents.
93. There is nothing else to do.

94. How important would you say religion or religious ideals are in your life?

    A. Very important
    B. Important
    C. Somewhat unimportant
    D. Very unimportant

95. From which group do you get most of your information about drugs? (choose only one)

    A. Friends
    B. Parents
    C. Other adults
    D. Teachers/counselors
    E. Brothers/sisters
    AB. Acquaintances/other
    AC. Treatment

96. How important is <u>high school</u> to your success in later life?

    A. Very important. People successful in high school are also successful later.
    B. Somewhat important. People who are successful in high school are usually successful later.
    C. Somewhat unimportant. High school success is only one of many important factors.
    D. Very unimportant. Success in high school has no relationship with success in later life.

97. Which of the following school activities did you participate in during the first semester? (choose all that apply)

A. Sports team (basketball, volleyball, etc.)
B. Speech, drama, theater, music (band, choir, etc.)
C. Student government, yearbook or newspaper
D. Other clubs or organizations
E. Support groups (NA, AA, Alateen, etc.)
AB. None

98. Which of the following best describes your grades during the last twelve months?

A. "A" student
B. "B" student
C. "C" student
D. "D" student
E. "F" student

How effective are these in discouraging drug and alcohol use? Please use the key below.

KEY:
A = Very Effective
B = Somewhat Effective
C = Somewhat Ineffective
D = Very Ineffective

99. Classroom instruction
100. Written school rules
101. Fear of suspension or expulsion
102. Parent conferences
103. Adult supervision of a school sponsored activity
104. Enforcement of drug policy
105. The co-curricular code
106. Fear of legal (police) consequences
107. School-sponsored prevention activities (i.e., Snowball, Snowcap, Healthweek, outside speakers)
108. Support groups

109. How much time, on the average, do you spend doing homework outside school?

A. None, or almost none
B. Less than 1/2 hour a day
C. About 1/2 hour a day
D. About 1 hour a day
E. About 1-1/2 hours a day
AB. About 2 hours a day
AC. About 2-1/2 hours a day
AD. 3 or more hours a day

110. About how many days are you absent (excused and unexcused) from school during an entire year?

A. 0-9 days
B. 10-19 days
C. 20-30 days
D. More than 30 days

111. Which best describes your use of alcohol?

A. Do not use
B. Before school
C. During school
D. Weekends only
E. During work
AB. After school
AC. Whenever I can

112. Which best describes your use of drugs?

A. Do not use
B. Before school
C. During school
D. Weekends only
E. During work
AB. After school
AC. Whenever I can

113. Which best describes your use of tobacco?

A. Do not use
B. Before school
C. During school
D. Weekends only
E. During work
AB. After school
AC. Whenever I can

How often did you feel like this in the past year? Please use the key below.

KEY:
A = Never
B = Occasionally
C = Often
D = Always

114. Depressed/lonely/empty
115. Worried
116. Confident/happy
117. Angry
118. Suicical

119. In this past year have you attempted suicide?
A = YES
B = NO

In the last month how often have you used the following? Please use the key below.

KEY:
A = I do not use
B = 1-2 times a month
C = 1-2 times a week
D = 3-5 times a week
E = Daily

120 Alcohol (beer, wine, etc)
121. Cocaine, crack
122. Depressants (valium, etc.)
123. Hallucinogens (LSD, PCP, etc.)
124. Heroin, narcotics, methadone
125. Inhalants (glue, nitrous oxide)
126. Marijuana
127. Misuse of non-prescription drugs or products
128. Sterioids
129. Stimulants (speed, etc.)
130. Tobacco (cigarettes, cigars, chew, dip, etc.)

131. From whom do you usually obtain alcohol?

A. Family member
B. Friends
C. Parents
D. Physicians
E. Other adults
AB. Never use

132. From whom do you usually obtain drugs?

A. Family member
B. Friends
C. Parents
D. Physicians
E. Other adults
AB. Never use

132. From whom do you usually obtain tobacco?

A. Family member
B. Friends
C. Parents
D. Physicians
E. Other adults
AB. Never use

134. Where is tobacco most easily obtained?

A. Own home
B. Other home
C. School
D. Local bars/liquor stores
E. Local parks/forest preserves
AB. Local shopping malls
AC. Gas stations
AD. Your place of employment
AE. Never used

135. Where is alcohol most easily obtained?

A. Own home
B. Other home
C. School
D. Local bars/liquor stores
E. Local parks/forest preserves
AB. Local shopping malls
AC. Gas stations
AD. Your place of employment
AE. Never used

136. Where are drugs most easily obtained?

A. Own home
B. Other home
C. School
D. Local bars/liquor stores
E. Local parks/forest preserves
AB. Local shopping malls
AC. Gas stations
AD. Your place of employment
AE. Never used

137. Who is generally with you when you use alcohol?

A. Alone
B. Family member
C. Friends
D. Parents
E. Other adults
AB. Never use

138. Who is generally with you when you use drugs?

A. Alone
B. Family member
C. Friends
D. Parents
E. Other adults
AB. Never use

139. Who is generally with you when you use tobacco?

A. Alone
B. Family member
C. Friends
D. Parents
E. Other adults
AB. Never use

140. Where are you most likely to use tobacco?

A. My home
B. Car
C. School property
D. Parties
E. Friends' houses
AB. Bars
AC. Public areas (parks, restaurants, shopping malls, etc.)
AD. Never use

141. Where are you most likely to use alcohol?

A. My home
B. Car
C. School property
D. Parties
E. Friends' houses
AB. Bars
AC. Public areas (parks, restaurants, shopping malls, etc.)
AD. Never use

142. Where are you most likely to use drugs?

A. My home
B. Car
C. School property
D. Parties
E. Friends' houses
AB. Bars
AC. Public areas (parks, restaurants, shopping malls, etc.)
AD. Never use

Please answer the following using the key below.

KEY:

A = YES
B = NO

143. I have been a passenger in a car driven by a friend who had been drinking or using drugs.

144. I have driven a car after drinking or using drugs.

145. Using alcohol or drugs has interfered with my homework.

146. I have been "hung over" in class during school.

147. I have been "under the influence" of alcohol or drugs while <u>in</u> class.

148. I have been "under the influence" of alcohol or drugs while at a school activity.

149. I have observed school staff who do not seem to be aware of students who are using/under the influence of alcoholor drugs in school or on the school premises.

150. I have observed school staff ignoring students using/under the influence of alcohol or drugs in school or on the school premises.

151. I have observed students using alcohol or drugs on school premises during school hours.

152. I have observed students using alcohol or drugs during school sponsored activities (sporting events, dances, etc.)

Although District 214 is not currently considering a drug testing program, there is much interest in the school and community about your opinions related to this issue. Please respond to the following questions by giving your opinion using the key below.

KEY:

A = Strongly agree
B = Agree
C = Neither agree or disagree
D = Disagree
E = Strongly disagree

153. Before being allowed to participated in school athletic programs, all students should be required to submit to periodic drug tests.

154. All students should be required to take unannounced drug tests.

155. A drug education and awareness program should be a part of every school curriculum beginning in grade school.

156. Schools have the right to ask students to submit voluntarily to a drug test if their school performance undergoes a sudden negative change.

157. Before hiring a new employee, a company should screen prospective applicants with a drug test.

158. I would submit to a drug test.

159. I have received help for alcohol and/or drug dependency in the following ways: (choose all that apply)

    A. In-patient hospital treatment program
    B. Outpatient treatment program
    C. Self-help groups (AA, NA, CA, RR)
    D. Family or individual counseling (therapist, psychologist, clergy, etc.)
    E. I have never received treatment for alcohol or drug dependency.

APPENDIX B

PERMISSION RELEASE

January 7, 1994

Alan Hovestadt, Ed.D.
Counselor Education & Counseling Psychology
3102 Sangren Hall
Western Michigan University
Kalamazoo, MI 49008-5195

Dear Dr. Hovestadt:

I am writing this letter to ask for written permission to use a subset of items of the Family of Origin Scale (FOS) in my dissertation research with adolescents and substance use and abuse. I spoke with you on the phone a few months back, and you graciously sent me copies of current research, along with your indications of the appropriate items from your previous study.

I am a doctoral student at Loyola University of Chicago, and am conducting research with a large sample of adolescents.

Thank you for your cooperation. I am looking forward to hearing from you. Please call collect (312-274-7784) if you have any questions.

Sincerely,

Concetta Petramala, M.Ed.
Doctoral Student
Loyola University of Chicago

_____ Yes, I give you permission to use a subset of the Family of Origin Scale for your research purposes.

_____
Signature

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The dissertation is, therefore, accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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