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**THE RELATIONSHIP OF PARENTAL SUPPORT, CONTROL ATTEMPTS AND
POWER TO ADOLESCENT DRINKING**

The University of North Carolina at Greensboro

PH.D. 1983

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THE RELATIONSHIP OF PARENTAL SUPPORT,
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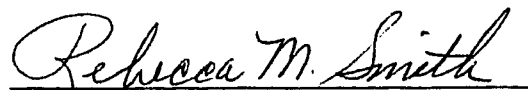
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Donald Wayne Reeves

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APPROVAL PAGE

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Adolescent alcohol consumption has become a topical issue with the overwhelming majority of high school students having had some experience with alcohol. However, a noticeable gap in the literature exists in relation to the influence of parental behaviors on adolescent drinking. This study examined the relationship of parental support, induction, coercion, and power to adolescent drinking level within the context of social exchange theory.

A self-administered questionnaire, completed by 87 male and 104 female freshman college students, measured perceived childrearing behaviors and parental power. Adolescent drinking was scored on a six-point scale ranging from abstinence to heavy drinking. The data were trichotomized into low, medium and high levels and then analyzed by the chi square test of independence. Sex of parent and power were controlled.

When controlling for parent, only fathers' childrearing practices were significantly related to adolescent alcohol consumption. Low father induction and low and high father coercion were found more likely to result in appropriate (low and medium) adolescent drinking. Likewise, high mother power was associated with appropriate alcohol drinking behavior. When controlling for power, medium mother support combined with low mother power seemed to be related to appropriate drinking. Appropriate adolescent consumption also seemed more likely to occur under the conditions

of medium father power combined with (a) low or medium father induction or (b) low father coercion. Other findings of the study were (a) fathers', mothers', and friends' drinking behavior and attitude were positively related to adolescent drinking and (b) parental power mediated many of the relationships.

The study concluded that parental childrearing practices, particularly fathers' control attempts, are related to adolescent alcohol consumption. However, social exchange-power theory only partially explained the findings. Power emerged as a salient factor, operating as a contingency variable which seemed to influence the relationships between childrearing practices and drinking, and autonomously functioning as a mediating force on adolescent alcohol consumption.

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CHAPTER I

INTRODUCTION

In recent years, society has become increasingly concerned with the phenomenon of adolescent alcohol use (Barnes, 1977). This concern is understandable in light of the results from a comparison of studies conducted between 1941 and 1974 which indicated a fourfold increase in the proportion of high school students having reported ever using alcohol (Marden & Kolodner, 1975). Studies conducted within the past years consistently show that between 75% and 90% of all high school students have had some experience with alcohol (Walker, Jasinska & Carnes, 1978). Yet, considering the increase in adolescent alcohol use and abuse, research relating to this phenomenon has been one of the more neglected areas of investigation in the field of alcohol studies (Walker et al, 1978).

Smart and Gray (1979) stated that a variety of factors were associated with adolescent alcohol use. These variables were categorized as (a) demographic, (b) parental, and (c) peer influences. Much debate exists in the adolescent drinking literature as to which of the three categories exerts the most influence, and how, in regard to adolescent alcohol use. Probably, one can safely say that all three factors influence the drinking behavior of the adolescent and the degree of influence is dependent upon the age of the child and the aspect of parental, peer, and community life that are most important to the young person at that particular point in time (Zucker, 1976).

Statement of the Problem

Over a decade ago Stacey and Davies (1970) indicated that few studies had investigated the influence of parental behaviors upon the drinking level of adolescents. Through a review of the current literature, there still appears to be a dearth of research in this area. Zucker (1976) outlined a rather simple heuristic model of parental influence upon the child's drinking. The classes of parental influence were (a) family status, life style, and community involvement, (b) family interaction factors, and (c) individual parent behaviors. Included in the individual parent behavior class were the parents' beliefs about alcohol, the parents' drinking behaviors, the personalities of the parents, and the parents' childrearing practices. The present study investigated the relationship of parental childrearing behaviors to the drinking behaviors of adolescents.

For many years, the child development literature has identified at least two parental behaviors considered to be most important in the socialization of children (Rollins & Thomas, 1979; Straus, 1964). These two parental behaviors are control and support. In the past, researchers often used control and power interchangeably. Recent theoretical conceptions by Rollins and Thomas (1979) have distinguished between power and control attempts. The present research focused upon the relationship of parental (a) power, (b) control attempts, and (c) support to the adolescent drinking level.

Value of the Study

Results from this interdisciplinary study, drawing from the literature in the child development and family relations fields, could

contribute to the understanding of adolescent alcohol consumption behavior. Significant findings will increase the knowledge of the relationship between parental childrearing behaviors and subsequent alcohol use by the offspring. Since few adolescent alcohol abuse prevention programs focus upon the parents' potential to prevent alcohol abuse, these findings may enhance the scope and nature of future adolescent alcohol abuse prevention activities.

Definitions

Parental Power

Parental power was defined as the ability of a parent to carry out his or her will in relation to the child, even when confronted with resistance from the child. Rollins and Thomas (1979) view parental power as a social relations construct instead of a parental behavior.

Parental Support

Parental support was defined as those parental behaviors that induce in the child a feeling of acceptance and worth and in which the child feels comfortable in the parent's presence (Thomas, Gecas, Weigert, & Rooney, 1974). Examples of such parental behaviors include praise, approval, helpfulness, encouragement, physical affection and terms of endearment.

Parental Control: Coercion and Induction

Control attempts were divided into two categories: coercion and induction. A coercive control attempt was defined by Rollins and Thomas (1979) as parental behavior "which results in considerable external pressure on the child to behave according to the parent's

desires" (p. 321). Examples of coercive control attempts are physical punishment, the taking away of privileges or material objects, the use of direct force, or threat of any of these. Coercion results in a direct conflict of wills with the child.

An inductive control attempt was defined "as behavior by a parent with the intent of obtaining voluntary compliance to parental desires by avoiding a direct conflict of wills with the child" (Rollins & Thomas, 1979, p. 322). A parent using induction would provide an explanation to the child regarding the desired behavior, as well as exploring with the child possible consequences to self and others.

Adolescent Drinklevel

Adolescent drinking level was labeled as (a) abstinence, (b) infrequent, (c) light, (d) moderate, (e) moderate-heavy and (f) heavy. Appropriate adolescent drinking was operationalized as the abstaining, infrequent, light and moderate drinking levels. Inappropriate drinking was defined as moderate/heavy and heavy drinking. This conceptualization is consistent with findings relative to adolescent problem drinkers. The 1975 National Adolescent Drinking Survey conducted by the Research Triangle Institute found that approximately 75% of the classified problem drinkers fell into either the moderate-heavy or heavy drinking levels (Rachal, Hubbard, Williams & Tuchfeld, 1976). Although appropriate drinking is not necessarily synonymous with nonproblem drinking, parallels can be drawn.

CHAPTER II

A REVIEW OF THE LITERATURE

Social power-exchange theory was employed as the theoretical framework for this study. Within the context of parent-child interactions, social power-exchange theory proposes that child compliance is obtained by the parent in exchange for the parent's rewards, control attempts, and services. Power operates as a contingency variable influencing the exchange process. Some previous studies have shown the existence of relationships between certain parental childrearing behaviors and adolescent alcohol consumption, but other researchers have failed to corroborate the findings. Recent developments in the measurement of parental childrearing variables may help in the exploration of some of these existing conclusions.

Theoretical Framework

The social power-exchange theory of Rollins and Thomas (1975), based upon Cartwright (1959), Thibaut and Kelly (1959), and Homans (1974), focuses on the exchange of goods or services in a social interaction context. The basic assumption of exchange theory is that individuals attempt to maximize rewards and avoid or reduce costs. The nature of rewards and costs cover the socio-psycho-economic spectrum. In a parent-child relationship, Richer (1968) stated that the most basic exchange is between parental support and child compliance. These two resources become mutually reinforcing. Social power theory posits

that the greater the power of one person over another, the greater the psychological force in the latter to comply to the control attempts of the former. According to French and Raven (1959), the supportive behavior of one person toward another increases the power the former person has over the latter.

According to Rollins and Thomas (1975), only parental support and control attempts have a direct impact upon child compliance. Parental power is viewed as a contingency variable influencing the relationship between support, control and compliance. Empirical generalizations in social power-exchange theory predict that the more the parents value a certain child behavior, the more supportive the parent. Also, the more powerful the parent, the more likely the child will comply (Rollins & Thomas, 1975).

The social power-exchange theory assumes that when a child is confronted by a control attempt, two forces emerge: a force to resist and a force to comply. The theory posits that the greater the power of the parent and the greater the use of inductive control techniques, the greater the likelihood of compliance without resistance. On the other hand, the more a parent relies on coercive techniques, the more likely a control attempt results in resistance in the child (Rollins & Thomas, 1975). In summary, the social power-exchange theory postulates that parental effectiveness in the socialization of children will be greater if the parent possesses high parental power and employs high support and high inductive, but low coercive, control techniques.

Various researchers have depicted relationships between parental support and control behaviors and desired child behaviors. Though the research may not have been cast in an exchange framework, some researchers (Richer, 1968; Thomas et al., 1974) would argue that an exchange, involving costs and rewards for the parent and child, had taken place.

Richer (1968) stated that as a child reaches two years of age he begins to realize that he possesses a valuable resource, which is his or her own use of compliance. Richer (1968) claimed that the period of time in which the child initially began to conceptualize the exchange was during bowel training. Elimination at the appropriate time usually resulted in praise and fondling. The child soon learned that proper elimination was a source of parental pleasure. As such, a basic exchange involving parental praise and fondling and desired behavior by the child has occurred.

Thomas et al. (1974) found high parental support to be positively related to adolescent conformity. The condition of low parental support is viewed as the parents having nothing to offer in exchange for the child's compliance or conformity. If the situation were low support and high control, the parents still have no affective resources to offer the child, yet they demand compliance without rewards. To minimize costs, the adolescent may comply. On the other hand, the adolescent may engage in nonconforming behaviors that offer greater rewards and less costs. Thomas et al. (1974) stated that these nonconforming behaviors may include such behaviors as rejection of parental values, use of drugs, unhappiness, and anomie.

Social power-exchange theory assumes that parents desire to socialize their children according to societal norms. There is no absolute cultural norm dictating acceptable or unacceptable drinking behaviors. However, public sentiment is rising in support of light to moderate drinking as opposed to heavy drinking. In this regard, it is assumed that most parents prefer that their children exhibit at least moderate levels of consumption, if not light drinking patterns or abstinence.

Therefore, appropriate adolescent alcohol use may be viewed as a desired behavior by parents. Thus, the parental behaviors of support and control attempts can be viewed as parental resources to be exchanged for appropriate adolescent drinking behavior.

Parental Support, Control and Power

The parent-child literature has consistently identified at least two parental variables as being very salient in accounting for parent influence in the socialization of children (Rollins & Thomas, 1979; Straus, 1964). These two variables are parental support and control. The socialization research has found parental support and/or control to be related to a wide array of child characteristics, such as cognitive development (Heilbrun & Orr, 1965), conformity (Smith, 1970), creativity (Siegelman, 1973), moral behavior (Hoffman, 1963), self-esteem (Thomas et al., 1974), antisocial aggression (Gordon & Smith, 1965), drug abuse (Baer & Corruis, 1974), schizophrenia (Heilbrun, 1960), and academic achievement (Barton, Dielman & Cattell, 1974).

There is general consensus that the parental dimensions of support and control are of utmost importance in the socialization process; however, there is less agreement as to whether these constructs are uni-dimensional or multidimensional. Some research findings are beginning to support a multidimensional view of these socialization variables (Ellis, Thomas & Rollins, 1976; Rollins & Thomas, 1975, 1979; Schaefer, 1965).

Parental Support

Support has often been used synonymously with warmth, nurturance or acceptance. Rollins and Thomas (1979) consider the term support to be more limited, and hence less ambiguous, than warmth and nurturance.

Historically, research emphasizing the multidimensionality of parental support has been very sketchy (Ferreira & Thomas, 1981). Ellis, Thomas and Rollins (1976), factor analyzing three measures of support, found a measure of general support plus two other dimensions of parental support --- companionship and physical affection. A cross-cultural study of parental behaviors conducted by Ferreira and Thomas (1981) found the supportive dimension to include the three measures of support, companionship, and physical affection for American and Brazilian children. The authors concluded enough evidence has accrued to justify conceptualizing support as multidimensional.

Parental Control

Through an extensive review of the literature, Rollins and Thomas (1979) found control usually to be operationalized as the degree of influence attempts by parents instead of the actual attainment of control. Hence, they employ the term control attempts.

Parental control attempts have proved to be much more problematic in assessing dimensionality. As opposed to support, the construct of control has been less consistent across studies of parents, children, social class, and cultures (Ferreira & Thomas, 1981). Over the years many researchers have concluded that parental control is composed of different dimensions (Baumrind, 1966; Hoffman, 1960; Maccoby, 1968; Schaefer, 1965).

Based upon previous research findings, Rollins and Thomas (1975) conceptualized the control dimension as being comprised of two types of parental control: coercion and induction. Coercion refers to parental behaviors that attempt to force the child to comply. These control attempts are contingent upon the status or physical power of the parent. Coercion is positively related to drug abuse, aggression, schizophrenia and other behavior problems (Ferreira & Thomas, 1981). Induction type control attempts aim to avoid a direct conflict of wills with the child. Induction type parental behaviors attempt to obtain voluntary compliance without a confrontation with the child. These control attempts are based upon explanations or reasons for desired behavior. Inductive control attempts positively correlate with self-esteem, moral behavior, internal locus of control, competence and conformity (Ferreira & Thomas, 1981).

Some factor analytic studies have illustrated that control is also comprised of dimensions in addition to coercion and induction (Baumrind, 1971; Schaefer, 1965; Siegelman, 1973). These additional dimensions are punishment, love withdrawal, autonomy granting and inconsistent control attempts. In the Ferriera and Thomas research

(1981), these items did not load on the coercion or induction factors, and the eigenvalues and reliability coefficients were relatively small. Thus, the present research concentrated upon coercion and induction as the more important dimensions of parental control.

Parental Power

Rollins and Thomas (1979) recently presented a theoretical conceptualization of parental power as being different from parental support and control. While support and control attempts are viewed as parental behaviors, power is held to be a social relations construct of a different nature. According to the literature in family power, power is defined as the ability (potential or actual), of an individual to achieve desired outcomes (McDonald, 1980a). The potential to influence is distinct from the actual exercise of power, yet these two concepts have often been confused with each other. Having the potential to control does not imply that one will attempt to control (Rogers, 1974). Power is not a characteristic of the individual, but determined by complex conditions governing the social network (Smith, 1970). In the social power-exchange theory, power emerges as a key independent variable. Indirectly, power effects child compliance by increasing the direct effects of parental support and parental control attempts. The efficacy of childrearing practices characterized by high parental behaviors would be enhanced if the parent had high power.

Power is described as a multidimensional phenomenon and divided into three separate categories by Cromwell and Olson (1975). The domains

of power were conceptualized as being power bases, power processes, and power outcomes.

Power bases, meaning the sources of power, are basically the resources of an individual. These resources can be economic (Blood & Wolfe, 1960), normative (Salifios-Rothschild, 1970), affective (Safilios-Rothschild, 1976), personal, and cognitive (Bacharach & Lawler, 1976). French and Raven (1959) first delineated the bases of power into the areas of legitimate, referent, expert, reward, and coercive power. Their research showed only that these bases of power are there only if the person on the receiving end believes that the other can and will use the power areas. The domains of power bases as viewed by French and Raven (1959) can be thought of as resources (McDonald, 1980b). Legitimate, referent, expert, reward, and coercive power are based upon norms, respect, knowledge, ability to dispense rewards, and ability to levy punishment, respectively. This conception of parental power is consistent with Baumrind's (1971) data as reinterpreted by Rollins and Thomas (1979). Baumrind's cluster of parental behaviors labeled "self-confident", secure, potent parental behavior" measured competence, power, knowledge, and confidence. Rollins and Thomas relabeled this cluster parental power.

Power processes refer to the various techniques employed in attempting to influence an individual. These techniques have been referred to as control attempts, assertiveness, negotiation, persuasion and influence (McDonald, 1980b). Power outcome simply refers to who decides or possesses the outcome.

Following Cromwell and Olson's (1975) conceptualization of power into the three separate domains of power bases, power processes, and power outcomes, then the parental behavior labeled control attempts become a special instance of power process. This study investigated this often neglected (Scanzoni, 1979) aspect of family power.

Through the reinterpreted findings of Baumrind's (1971) work, Rollins and Thomas (1979) posited that the support, coercion, induction, and power variables were the most important in explaining parental influence upon child behavior.

Contextual Variables

Parental support and control attempts operate within the context of other variables. Based upon the literature, the following variables impact upon control attempts and support: (a) sex of child, (b) sex of parent, (c) age of parent, (d) number of siblings, and (e) education of parent.

Sex of Child

Over the years, many researchers (Baumrind & Black, 1967; Ferreira & Thomas, 1981; Seigelman, 1965) have demonstrated that boys and girls receive differential treatment from parents. Generally, boys receive more control (coercion) and less support than girls. Girls receive less support from fathers than boys do.

Sex of Parent

Sex of parent is also related to type of behaviors employed, although the findings have been more inconsistent than those surrounding

sex of child. Baumrind and Black (1967) and Siegelman (1973) reported that girls and boys received more support from mothers than from fathers. Mothers also used more controlling techniques than fathers (Thomas & Weigert, 1971). Despite the higher support and controlling scores for mother, Thomas et al. (1974) reported that both boys and girls conform more to father than to mother. It was concluded that greater fraternal power may be the reason.

Age of Parent and Number of Siblings

Carter and Welch (1981) found childrearing behaviors to be related to age of the parent and to number of children in the family. The number of children in the family was positively related to coercion and negatively to induction. Older parents are more likely to have a greater number of children in the family; hence, increasing age of the parent was associated with greater use of coercion and less use of induction.

Education of Parent

Occupation or social class has been studied in relation to parental childrearing practices. Hoffman (1960) and Ferreira and Thomas (1981) reported greater use of coercion by working-class parents than by middle-class parents. The middle class is more likely to use inductive control techniques. Thomas et al. (1974) stated that white-collar children receive more support than blue-collar children. In view of the high correlation between occupation and education, education was conceptualized as the intervening variable.

Parental Childrearing Behaviors and Adolescent Drinking

Various researchers have reported that parental factors do influence the drinking behavior of adolescents. Positive associations have been found between adolescent drinking practices and such variables as incomplete socialization (Jessor, Graves, Hanson, & Jessor, 1968), unsatisfactory intrafamilial relationships (Tennant, Detels & Clark, 1975; O'Connor, 1977) and parental role models relative to alcohol use (Barnes, 1977; Lassey & Carlson, 1980). Inverse relationships have been found between the drinking behavior of adolescents and affinity to parents (Alexander, 1975; Lassey & Carlson, 1980; Tudor, Petersen & Elifson, 1980) and communication with parents (Lassey & Carlson, 1980). Zucker (1976) found heavy consumption of alcohol by adolescents to be related to parental rejection, greater parental pressure, harsher disciplinary practices, and less parental support and companionship. Prendergast and Schaefer (1974) also reported adolescent drinking to be greater under lax maternal control and parental rejection, although the findings were not replicated in a study by Smart, Gray and Bennett (1978).

Zucker (1976) studied the effects of self-reported measures of childrearing practices upon heavy consumption and problem drinking among adolescents. The study was conducted in a Middle Atlantic community and consisted of a stratified sample of students from the town's one public high school. Heavy-drinking and problem-drinking boys had mothers who perceived themselves as cynical and antisocial. The mothers stated their childrearing practices involved open rejection and little pressure. The fathers perceived themselves in a similar fashion.

However, the heavy-drinking adolescent boys in Zucker's (1976) study perceived their mothers as relatively neutral figures, but less often present. The boys reported their fathers as being affectionately distant, emotionally unrewarding and uncaring. Mothers of heavy-drinking girls reported themselves as providing little parent-child interaction and few attempts to shape behavior via praise and affection. Fathers saw themselves as having little influence upon their daughters' drinking. Reports from the heavy-drinking girls indicated a greater picture of rejection, neglect and lack of support, affection, and companionship from their mother and father alike. Childrearing practices toward the heavy-drinking and problem-drinking girls were very similar, except the latter's fathers were more antagonistic and the mother more anxious.

Jessor et al. (1968) surveyed 253 mothers in a tri-ethnic community in Southwestern Colorado. The study was concerned with the prediction of deviancy and used problem drinking as a measure of deviancy. Their theoretical construct stated that the socialization beliefs and practices should be related to the child's alcohol-related deviance. The socialization process is viewed as having three major parts: (a) the parental reward structure (affectional interaction and influencing techniques), (b) the parental belief structure (involving extent of alienation from the larger society, beliefs about internal versus external control), and (c) the parental control structure (involving limit setting, sanctions, exposure to deviant model). They found that problem drinking related to low mother-child interaction, less

mother responsiveness to child's needs, and greater maternal alienation from larger society.

Prendergast and Schaefer (1974) polled 23 girls and 34 boys in a semirural high school in North Carolina. The authors sought to define the importance and interrelationship of three aspects of parental influence on adolescent drinking levels. The three levels of parental influence were (a) parents as models, (b) parents as educators and (c) parents as sources of support for the concerns of adolescence, as opposed to contributing to those problems.

Unlike other studies assessing the influence of the parent-child relationship, Prendergast and Schaefer's study employed a more "refined instrument". A modified version of Schaefer's (1965) Child's Report of Parent Behavior Index (CRPBI) was used. The 12 scales used in the study were (a) rejection, (b) control, (c) enforcement, (d) positive involvement, (e) control through guilt, (f) inconsistent discipline, (g) nonenforcement, (h) acceptance of individuation, (i) control through persistent anxiety, (j) hostile detachment, (k) control through withdrawal of relations, and (l) extreme autonomy. Through factor analysis, Prendergast and Schaefer (1974) derived three factors: I, acceptance-rejection; II, firm control-lax control; and III, psychological control-psychological autonomy.

The scales mainly composing factor I were positive involvement and acceptance of individuation (Acceptance), and rejection, hostile detachment, and inconsistent discipline (Rejection). Factor II included the scales of control and enforcement (Firm-control) and of nonenforcement and extreme autonomy (Lax-control). The scales

contributing principally to Factor III were control through guilt, inconsistent discipline, control through persistent anxiety, and control through withdrawal of relations (Psychological control and autonomy).

Using multiple regression analysis, Prendergast and Schaefer (1974) found significant moderate correlations between adolescent drinking frequency and paternal acceptance-rejection ($r=.41$) and maternal acceptance-rejection ($r=.34$). More drinking was associated with greater rejection by mothers and fathers. Significant relationships were also reported between drinking and maternal lax-control ($r=.34$). There was no relationship between paternal lax-control and drinking. Relatively low correlations were found between adolescent drinking frequency and paternal and maternal psychological control. When the parent's drinking behavior and attitude were controlled, the same directional relationships were found between the dependent and independent variables as was found without controlling, except the correlations were attenuated. In addition, a significant positive correlation emerged between paternal and maternal psychological-control and adolescent drinking behavior.

For the drunkenness index, there was a significant but moderate correlation between maternal firm control-lax control ($r=.39$) and between paternal acceptance-rejection ($r=.39$). Greater drunkenness was positively associated with lax-control by the mother and rejection by the father. No other parental behaviors were significantly related to adolescent's frequency of drunkenness. Prendergast and Schaefer (1974) concluded that maternal lax-control and paternal rejection

taken together were better predictors of adolescent alcohol use than either parental drinking behaviors or parental attitudes toward alcohol use. However, it must be remembered that the sample was very small (23 girls and 34 boys).

Smart, Gray and Bennett (1978) incorporated the variables of parental control and rejection in their study of 1,439 high school students in Ontario, Canada. In addition to the same control and rejection scales used by Prendergast and Schaefer (1974), Smart, Gray and Bennett (1978) also included scales to assess alcohol knowledge, parental drinking behavior, problem drinking, peer drinking behavior, and drinking milieu.

The results from a Multiple Classification Analysis indicated that only child's age, father's alcohol use, and peer drinking behavior had much explanatory value for distinguishing between drinkers and nondrinkers. The most important variables in predicting the level of alcohol consumption were (a) extent of alcohol use, (b) drinking in cars and, (c) drinking milieu (drinking away from home).

Smart, Gray and Bennett (1978) failed to find any relationship between parental childrearing behaviors (control and rejection) and adolescent drinking behavior. The contrary findings may be due to difference in sample size and method of statistical analysis.

Limitations of Current Research Reviewed

Though parental support and control are considered to be important concepts in the socialization process, there is a dearth of such studies in the adolescent drinking literature. The research of Zucker (1976), Prendergast and Schaefer (1974), Smart et al. (1978); and Jessor et al.

(1968) are the only studies this author found employing control- or support-related concepts with adolescent drinking behavior. Only the latter authors conducted their research in the context of a theoretical framework, which was a model of deviancy and unrelated to the present research. Furthermore, the studies which specifically attempted to measure parental support and control (Prendergast and Schaefer, 1974; Smart et al., 1978) used an instrument that is suspect relative to these dimensions.

Prendergast and Schaefer (1974) used the Child's Report of Parental Behavior Inventory, revised and validated by Schludermann and Schludermann (1970), which has been widely adopted as a measure of parental support and control attempts. Schaefer (1965) labeled the three obtained factors: acceptance-rejection, lax control-firm control and psychological control-psychological autonomy. Acceptance-rejection is supposedly a measure of support whereas psychological-control-autonomy and lax control-firm control have respectively been used as measures of induction and coercion (Rees, 1979). According to Ferreira and Thomas (1981), some factor analytic studies consistently show dimensions of parental control attempts that differ from induction and coercion. Items measuring punishment, love withdrawal, autonomy granting and inconsistent control attempts form their own dimensions instead of clustering with coercion. Forms of these items are found on Schaefer's dimensions of psychological control-autonomy and lax control-firm control. Following advances in theory and measurement of parental control attempts, Schaefer's inventory may be a less than valid instrument in this respect.

Three measures of parental support were analyzed by Ellis et al. (1976) in an attempt to further refine the support dimension and its mode of measurement. The "Parental-Child Interaction Rating Scale" (Heilbrun, 1964); the "Cornell Parent Behavior Description" (Devereaux, Bronfenbrenner & Rodgers, 1969); and the "Parent Behavior Inventory" (Schaefer, 1965) were compared. They found that the support items from the Heilbrun and Cornell measures clustered together without any of the acceptance-rejection (support) items from Schaefer's measure. Their analysis showed that support items and rejection items were not opposite ends of the same dimension. Ellis et al. (1976) concluded the Heilbrun and Cornell instruments to be a more defensible measure of parental support.

Prendergast and Schaefer (1974) and Smart et al. (1976) used only the rejection and control scales to measure support and control attempts. Thus, the results of both studies can be suspect in regard to adequately measured parental support and control variables.

Zucker (1976) and Jessor et al. (1968) both talked about the childrearing characteristics of the parents of heavy- and nonheavy-drinking adolescents. Zucker (1976) found support-type items to be related to adolescent drinking, but for the most part, control was not significant. Aside from parental control attempts not being associated with adolescent drinking, at least two other explanations are plausible. One, the instruments did not adequately measure the dimensions of control. Second, the method of data analysis may not have been appropriate. For example, Zucker (1976) correlated each question with adolescent drinking and did not combine the data into coercive and inductive

scores. Jessor et al. (1968) briefly mentioned the parental reward and control structure in their theory of deviancy, but the questionnaire only contained a few items relevant to childrearing techniques. Furthermore, only mothers were surveyed in regard to these items. Other researchers (Ausubel, Balthazar, Rosenthal, Blackman, Schpoont & Welkowitz, 1954; Thomas et al., 1974) have cautioned against this practice, stating the child's perception of parental action is theoretically more important in determining the child's behavior.

Parental power is an integral component of social power-exchange theory. Yet none of the aforementioned studies attempted to investigate the relationship of parental power to adolescent drinking.

In light of these limitations and concerns, then what are the relationships between adolescent drinking and parental power, coercion, induction and support? Rollins and Thomas (1979) discussed parental power, but no studies have explored the association between parental power and parental coercion, induction and support. For example, are the relationships between adolescent drinking and parental coercion, induction and support dependent upon parental power? From the parent-child literature, it is evident that differences in childrearing practices are associated with sex of child, sex of parent, education of parents, number of offspring and age of parents. Which of these variables are most important and how do they influence adolescent drinking?

Drinking Attitudes and Behaviors

The primary purpose of this research was to investigate the process of the influence of childrearing practices on adolescent

drinking behavior. As such, specific parental childrearing behaviors were identified as being more or less important to the formation of various adolescent drinking levels. This process was cast in a social exchange framework.

Yet, other theories have demonstrated their ability to explain at least a portion of the variance of adolescent drinking behaviors. Social learning theory, in particular, has been at the forefront in predicting adolescent drinking behavior. Social learning theory posits that parental and peer drinking behaviors and attitudes toward drinking influence the adolescent's own drinking behavior in a positive direction (Walker et al., 1978).

Incorporating several questions relating to social learning theory in this research provided a rough measure of the relative importance of social exchange theory and social learning theory in explaining the variance of adolescent drinking behavior. Additionally, what is the relative importance of various parental behaviors and attitudes (childrearing practices, drinking behavior, attitude toward drinking) to adolescent drinking behavior? This information could be valuable for future research endeavors as well as for planning intervention strategies.

Hypotheses and Model

From the previous discussion, general hypotheses of adolescent drinking based upon the parental variables of power, coercion, induction and support (general support, physical affection, companionship) can be formulated. The parental behaviors of support and control attempts

exert direct influence upon adolescent drinking, with parental power having an indirect effect (See Figure 1).

The two types of control attempts, coercive and inductive, are delineated due to their different impact upon the child's behavior, whereas the dimensions of support have not been found to result in different child behaviors. Coercion and induction seem to have opposite effects upon desired results. Induction augments the attainment of appropriate child behaviors; coercion deters this desired outcome. The three dimensions of support can be viewed as being additive. A relationship exhibiting high general support, high physical affection, and high companionship will be more supportive than a relationship high in only general support and physical affection.

Parental power indirectly influences adolescent drinking through a direct effect upon control and support. To reiterate, parental power is a social relations construct reflecting resources. The greater the resources, the greater the parental power, then the greater the potential of the parent to influence the child through either support or control attempts.

As such, the following general hypotheses were examined:

1. The greater the parental support, the greater the likelihood of appropriate adolescent drinking.
2. The greater the parental induction, the greater the likelihood of appropriate adolescent drinking.
3. The greater the parental coercion, the less the likelihood of appropriate adolescent drinking.

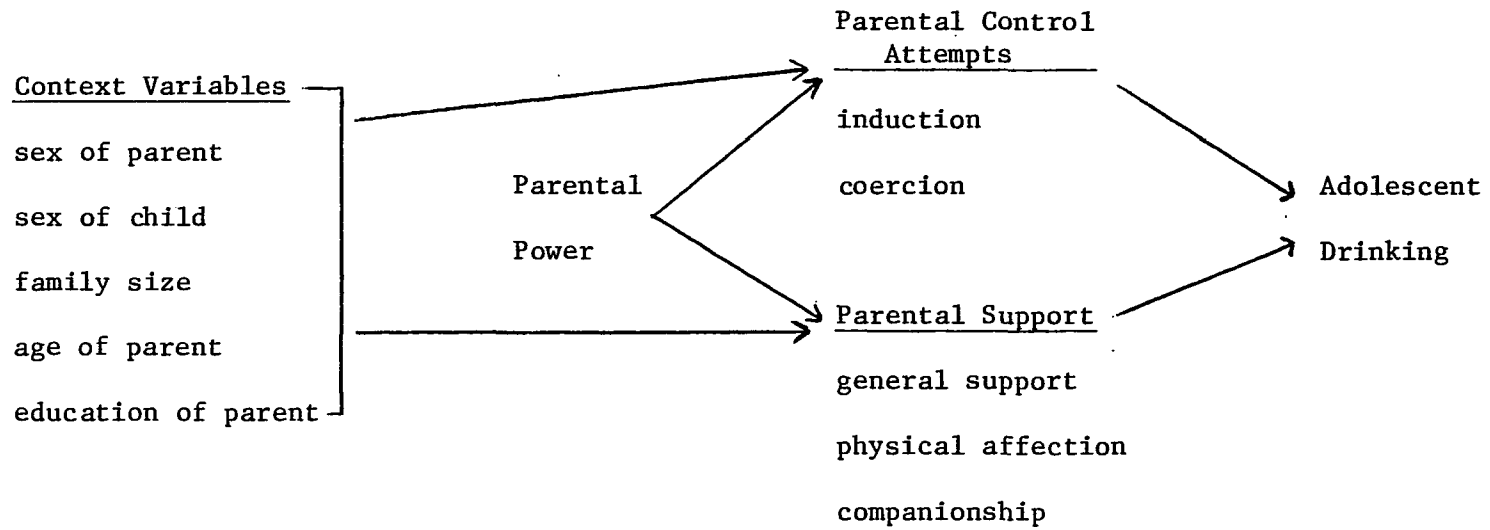


Figure 1. Model of Parental Influence on Adolescent Drinking

4. The greater the parental power, the greater the likelihood of appropriate adolescent drinking.

Some studies have shown that the predictability of the child's behavior is contingent upon the sex of the parent exhibiting a particular behavior. Prendergast and Schaefer (1974) reported that father's acceptance-rejection of the child was more important than mother's in explaining adolescent drinking behavior. Likewise, McDonald's (1977) model of sex identification and parental power was slightly stronger when fathers were perceived to possess greater power than mothers. Prendergast and Schaefer (1974) also found a relationship between mother's control and adolescent drinking, but no association with control by fathers. Through the mediated effects of the contextual variables on parental control attempts and support, the following hypotheses were tested:

5. The greater the father support, the greater the likelihood of appropriate adolescent drinking.

6. The greater the mother induction, the greater the likelihood of appropriate adolescent drinking.

7. The greater the mother coercion, the less the likelihood of appropriate adolescent drinking.

8. The greater the father power, the greater the likelihood of appropriate adolescent drinking.

The contextual variables (sex of child, sex of parent, number in family, age of parent, education of parent) influence control attempts and support relative to (a) the quantitative use of control attempts and support and (b) type of control attempts employed.

In other words, the contextual variables influence how much support and control a parent provides the child and whether the control attempt is manifested as coercion or induction. The contextual variables are conceptualized as operating independently. The relative strength of each contextual variable is presently unknown. Based upon the prior discussion of the relationships between the contextual variables and parental control attempts and support, the following hypotheses were investigated:

9. Girls are more likely to drink appropriately than boys.
10. The greater the number of children in a family, the less the likelihood of appropriate adolescent drinking.
11. The older the parents, the less the likelihood of appropriate adolescent drinking.
12. The higher the education of the parents, the greater the likelihood of appropriate adolescent drinking.

From the stated hypotheses, the best adolescent drinking model, in terms of appropriate consumption, consists of the following combination of childrearing variables: high father support, high mother induction and low mother coercion. These childrearing practices will be most effective operating under the condition of high father power.

CHAPTER III

METHOD AND PROCEDURE

Cross-sectional ex post facto research is inferior to the longitudinal true experiment for establishing causality, but given the nature of the present research problem, experimental and longitudinal survey research would be prohibitively expensive, time consuming, and unethical. Survey research is an accepted approach to social science research and if carefully controlled can produce valid and reliable conclusions. Thus, the present study employed questionnaires to obtain information about the major variables of perceived parental childrearing behaviors, perceived parental power, and self-reported adolescent alcohol consumption.

Self-administered questionnaires were used to collect the data. Interviews would have allowed for probing and greater clarification, but due to the large number of respondents and the difficult task of coding and categorizing responses, questionnaires proved most convenient.

Subjects

High school students were originally proposed as the population. Four public school systems in eastern North Carolina were approached about participating in this research. All four school systems declined to participate, citing such reasons as (a) no research is allowed or (b) the nature of the research is politically too risky. It appeared that other high schools would not be willing to cooperate; therefore, first-semester freshmen from institutions of higher education

seemed to be a reasonable alternative for the adolescent subjects needed.

Students enrolled in freshman-level courses at a moderate-sized university and a moderate-sized community college participated in the research. Both schools were located in a rural/progressive area in the southeastern seaboard. Approximately 15% of the participants were 17 years old with the remaining being 18 years of age. Only seven students from the community college were eligible. The sample was composed of 87 males and 104 females.

The participants from the university were enrolled in a required health education course. During the 1982 fall semester 22 course sections were offered. Incoming freshmen were randomly assigned by computer to one of the sections. During the month of September, the researcher surveyed eight sections, with careful attention given to the time of the sections. The selected classes were balanced with respect to Monday/Wednesday and Tuesday/Thursday sections and to morning and afternoon sections. One of the chosen sections was one of two "special" sections, meaning the students assigned to that section were regarded as at-risk students. These students had failed to meet minimal requirements for admission to the university but were admitted based upon factors indicating the potential to succeed.

Similar procedures were followed in selecting participants at the community college. A required history course with students randomly assigned to sections was chosen by the community college's administration. Two sections were surveyed. After deleting surveys

completed by students older than 18 years of age, only seven eligible surveys remained.

Permission (See Reference Note 1) to survey students in the two institutions was obtained from appropriate administrators of each institution. The Human Subjects Review Committee at UNC-Greensboro also approved this research.

Research Design

This research utilized an ex post facto design involving four major independent variables: (a) parental power, (b) parental support, (c) parental coercion, and (d) parental induction. The dependent variable was alcohol beverage consumption.

Neither a multivariate analysis of variance nor multiple regression analysis was appropriate since the dependent variable was an ordinal measure. Therefore, a chi-square analysis was chosen. The analysis controlled for sex of parent while comparing parental power with the other three variables one at a time. Demographic variables (sex of child, number of children in the family, age of parent, and education of parent) and alcohol beverage consumption of parents and peers were utilized in further analysis.

Data-Gathering Procedures and Instruments

Prior to the administration of the survey instruments (See Appendix A), the researcher informed the students the questions were concerned with the way their parents have related to them over the past several years and their own alcohol consumption level. Participation was strictly on a voluntary basis. Students had the options not to take part and to omit any question. The issues of

confidentiality and of responding accurately were discussed. The participants were instructed how to respond to the items. If the student could not remember one or both parents well enough to rate, instructions stated to rate another close, same-sex person who was parent figure for the student.

The survey instrument contained 110 items. Items 1-7 were concerned with the demographic variables. Parental support was measured by items 8-17, 25, 27, 32, 36, 37, 41, 48 and 50. Items 18, 28-31, 34, 44, 46, 47, 51, and 54-56 measured parental induction. Parental coercion was measured by items 20-24, 26, 33, 35, 38-40, 42, 43, 45, 49, and 52-54. Parental power was measured by items 57-102. Parents' and peers' attitude and drinking behavior were measured by items 103-108 and the adolescent drinking level was measured by item 109. Item 110 measured the comparative level of drinking between subject and peer.

Measurement of Dependent Variable: Adolescent Drinking

The dependent variable, adolescent drinking (See item 109 in Appendix A), was measured by a scale developed by Rachal, Williams, Brehm, Cavanaugh, Moore and Eckerman (1975) for use in a national study conducted by the North Carolina Research Triangle Institute (RTI). Either frequency or quantity measures alone can be used to classify drinking levels. Many adolescents drink small amounts frequently; therefore, a simple frequency scale would overstate the drinking level for this adolescent group (Rachal, Hubbard, Williams & Tuchfeld, 1976); however, a quantity scale may understate the level. Thus, the RTI group adopted quantity-frequency indices which had been used efficiently in the past. Basically, the respondent was rated according to the

number of drinks consumed per typical drinking occasion and the average frequency of drinking episodes.

First, a separate measure of the frequency of beer, wine and distilled spirit consumption was obtained. The frequencies ranged from daily (at least one beverage per day) to no alcoholic consumption. Next, Rachal et al. (1975) had the respondents rate the highest number of units of alcoholic beverage consumed on the typical drinking occasion. A unit was defined as a can of beer, a glass of wine or a drink of liquor. All respondents other than abstainers were put into one of the nine drinking classes computed from the quantity-frequency (Q-F) method. The nine cells were combined into five groups: infrequent, light, moderate, moderate-heavy and heavy drinking (see Appendix A).

Validity of the classification has not been reported, but preliminary results indicate that students seem generally to be placed in the same Q-F category regardless of which Q-F system was used (Rachal et al., 1976). However, the classification scheme used in the RTI study has been criticized for being inconsistent in defining drinking levels (Marden, Zylman, Fillmore & Bacon, 1976). Yet, Harford (1976) pointed out that everyone does not have to agree with the definitions as long as they are clearly operationalized and not too different from generally accepted standards.

Measurement of Independent Variables:
Support, Coercion and Induction

The perceived parental behaviors of support and control attempts (coercion and induction) were measured by an instrument developed by Rollins and Thomas and reported in Ferreira and Thomas (1981). They

developed items to measure induction and added selected items from the Parent-Child Interaction Rating Scale (Heilbrun, 1964), the Cornell Parent Behavior Inventory (Devereaux et al., 1969) and the Parent Behavior Inventory (Schaefer, 1965) to make an 85-item questionnaire measuring induction, coercion, physical punishment, autonomy granting, inconsistent control, love withdrawal, support, physical affection and companionship.

Using the Rollins and Thomas questionnaire in a cross-cultural study, Ferreira and Thomas (1981) obtained reliability coefficients of .899 and .879 for coercion and induction, respectively. Though a reliability coefficient was not reported for support, items from all three support dimensions tended to have higher factor loadings than either the coercion or induction items.

Whether or not the scales are valid is a more difficult question, since validity is essentially a question of consensus among the scholarly members of a given field. However, factor analysis does lend some measure of construct validity. Ferreira and Thomas (1981) did not specifically report any validity measures in their cross-cultural work, but the item loadings for the general support, physical affection, companionship, induction and coercion factors were consistent with other studies. Though some of the items had been modified, they still clustered into the same three dimensions of support reported by Ellis et al. (1976). The general support factors consisted primarily of items from the Cornell and Heilbrun measures, whereas the companionship and physical affection factors also included many of Schaefer's items.

Ellis et al. (1976) reported on the construct validity of the Cornell and Heilbrun measures by employing hypothesized relations between the scales and outside variables. The outside variables were (a) closeness to siblings, (b) communication from parent and (c) self-esteem. They hypothesized that perceived parental support would correlate relatively highly with the perceived closeness to sibling, since the child is gauging an affect level within the family domain. Communication with parents was also expected to correlate highly with parental support since several of the items specifically involved communication. Research has supported the relationship between parental support and self-esteem (Thomas et al., 1974); therefore, it was also expected to correlate highly with the questionnaires. The average correlation between the Heilbrun and Cornell measures and the outside variables were $-.36$ on closeness to siblings, $.67$ on communication, and $.16$ on self-esteem. Ellis et al. (1976) concluded the expected positive associations with communication and self-esteem provided construct validity for the Cornell and Heilbrun measures.

Only the items measuring coercion, induction, and support (general support, physical affection, and companionship) were employed in the present study. When combined, the 13 induction items (18,28,29,30, 31,34,44,45,47,51,54,55 and 56 in Appendix A), 18 coercion items (20,21,22,23,24,26,33,35,38,39,40,42,43,45,49,52,53 and 54 in Appendix A) and 20 support items (10 items [8,9,10,11,12,13,14,15,16 and 19 in Appendix A] measuring general support and 5 items each measuring physical affection [17,19,27,32 and 36 in Appendix A] and

companionship [25,37,41,48 and 50 in Appendix A]) resulted in a 51-item questionnaire. The items were measured on a Likert scale with either a 3-point or 5-point response. The items of each dimension are cumulative, with general support, physical affection, and companionship factors comprising the support dimension. The perceived parental behaviors were scored separately for mother and father.

Measurement of Independent Variable: Power

Parental power was measured by an instrument originally developed by Smith (1970) and modified by McDonald (1977). The responses were scored by a 7-point Likert scale ranging from "strongly agree" to "strongly disagree." Their survey contained a total of 23 items based on the five bases of parental power delineated by French and Raven (1959). Parental power in this study was measured by items 57-102 in Appendix A.

Cornille (1981) obtained internal consistency data on the scale by analyzing each parent's potential power in reference to the overall degree of reliability and the contribution of each power item to that score. The overall reliability of McDonald's version of Smith's parental power scale was .904 for fathers and .861 for mothers. For mother power, the alphas for each item ranged from .846 to .874. The range of alphas for the father items was .896 to .915. The alphas for each subgroup were also fairly strong, with the weakness for mother power and father power being outcome-control. Cornille (1981) concluded that the instrument was a generally reliable scale of father power. He did caution against using the outcome-control subscale as a single measure.

Outcome and control power, combined into a single dimension by McDonald, focused upon the parent's role in the control of economic resources and in decision-making and the perceived strength of parental rewards and punishments. The adolescent's predisposition to consult with the parent for guidance and advice measured referent power. Legitimate power was measured by the adolescent's perception of the parent's authority to employ power. The parent's competence and knowledge in the heterosexual and educational areas of adolescent life, as perceived by the adolescent, measured expert power.

The items were scored separately for mother and father. The legitimate (60,61,62,63,69,70,74,75,80,83,84,87,93,94,96, and 98 in Appendix A) and expert (64,65,66,67,71,76,77, 7,88,89,90,91,95,100, 101, and 6 in Appendix A) bases of power each contained 8 items compared to 4 items each for outcome-control(57,72,78,79,85,86,99, and 102 in Appendix A) and referent (58,59,68,73,81,82,92, and 97 in Appendix A) power. The demographic questions (6 and 7 in Appendix A) concerning parent's level of education were also included as two of the eight expert power items. To make the range of each of the four power variables for each parent identical, father's and mother's legitimate and expert power items were summed and divided by two. Mother and father power was operationalized as the summation of the power dimensions.

Contextual Variables

With the exception of sex of parent, which was differentiated throughout the questionnaire, all the contextual variables were scored

as demographic data. These data included sex of adolescent, age of parent, family size, and education of the parent.

Scoring Procedures

Considering the nominal and ordinal nature of the questions, the data were reduced into trichotomies for appropriate data analysis. Three categories (low, medium and high) as opposed to binary divisions were chosen in light of some suggestions that a curvilinear relationship might be found between parental childrearing variables and child behaviors (Rollins & Thomas, 1979).

Adolescent Drinking Behavior

For the dependent variable of adolescent drinking (See item 109 in Appendix A), abstinence and infrequent drinking were combined into the low drinking category. Medium drinking consisted of the light plus moderate drinking responses. The high drinking category was composed of those adolescents who responded as moderate/heavy or heavy drinkers. These limits are congruent with what is considered satisfactory for low, medium and high criteria in the alcohol field (See Reference Note 2). Low and medium drinking was defined as (a) appropriate drinking, whereas high consumption was relabeled (b) inappropriate adolescent drinking (see Table 1).

Parental Support, Induction, Coercion, and Power

The parental variables of support, induction, coercion, and power were all trichotomized using the accepted practice of a theoretically equal number of responses into each category (see Appendix B). The categories of low, medium, and high for both parents together represent a rough approximation of 33.3% of responses in each

Table 1

Frequency and Percentage of Adolescent Alcohol Consumption

Drinklevel	Frequency	Cumulative Frequency	Percentage	Cumulative Percentage
Appropriate				
Low Level				
Abstinence	19	19	9.948	9.948
Infrequent	20	39	10.471	20.419
Medium Level				
Light	32	71	16.754	37.173
Moderate	57	128	29.843	67.016
Inappropriate				
High Level				
Moderate/ Heavy	34	162	17.801	84.817
Heavy	29	191	15.183	100.000

division. However, controlling for sex, the ranges and frequencies were found to be different for father's and mother's scores (See Appendix B). However, the same cut-off points for both parents together were employed as for parents by sex so that comparison of results would be enhanced. The category cut-off points for support, induction, coercion and power distributions were obtained by trichotomizing father's and mother's frequencies of responses separately into 33.3% (approximately) divisions and then averaging the two separate cut-off points to yield a third cut-off point. The third cut-off point became the common point of division for both father's and mother's frequencies.

Contextual Variables

The contextual or demographic variables also were trichotomized. The divisions for family size were determined by the same procedure used for dividing the parental variables. Approximately a third of the respondents fell into each of the low, medium, and high categories. Families labeled as low in size had zero to two children. Medium sized families had three children and high sized families had four or more children (See Appendix C).

Participants scored father's and mother's education (See Appendix C) on a seven-point response list ranging from less than seven years of formal schooling to received a postgraduate degree. The distribution was heavily loaded toward the higher education end, which was to be expected with this sample. Therefore, education was trichotomized according to reasonable limits as opposed to equal percentages. Parents with a college degree were rated as having

attained a high level of education. Those that had nine or fewer years of education were labeled as having a low level of education, with in-between 10 and a college degree rated medium in education.

Age of the parent (See Appendix C) was precoded into one of ten categories, each with a range of four years. The entire age range was from 34 years of age to the early 70s, with the mode-range for mother and fathers being 42-45. Low age range was 34-45 and medium age range was 46-57. High age range included everyone older than 57 years of age.

Drinking Behavior and Attitude of Others

In order to understand more about the relationship between the adolescents' own and significant others' drinking behavior, items 103, 104 and 107 were included (See Appendix A). Others' drinking behavior was divided into three levels (See Appendix D). Significant others who did not drink were classified as low drinkers. Those who drank less than once a month to monthly were labeled medium drinkers and those significant others who drank weekly to daily were considered high drinkers.

Since others' attitudes about drinking may influence one's own drinking, items 105, 106, and 108 (See Appendix A) asked about parents' and friends' approval. Parents' and friends' attitude, ranging from strongly approve to strongly disapprove, was also trichotomized (See Appendix D, Table I). Strongly approve and approve was labeled as approve whereas strongly disapprove and disapprove comprised the disapprove category. A neutral response

was the third category. Item 110 was added to gain a better understanding of the influence of friends.

In summary, the methods and procedures employed in this research allowed for greater understanding of (a) parental childrearing variables and (b) the relationship between parental support and control and adolescent drinking. In addition, the inclusion of parental power allowed for (c) an investigation of the relationship between power and childrearing variables and (d) the relationship between parental power and adolescent drinking. Further investigation was also possible for studying the relationship of adolescent drinking with (e) demographic variables and others' drinking behavior and attitude.

CHAPTER IV

ANALYSIS OF THE DATA

The data for this research were collected from freshmen attending two southeastern institutions of higher learning. In the fall of 1982, students at a moderate-sized university and a moderate-sized community college were surveyed relative to their alcohol beverage consumption level and their perception of their parents' childrearing behavior. The random cluster sampling procedure produced 87 males and 104 females.

Statistical Approach to the Data

The chi-square test of independence was chosen as the most appropriate statistical technique in which to examine the nonparametric data which were frequencies of the ordinal data. The chi-square procedure provides an omnibus test, which makes it less sensitive than other tests, but enables unusual relationships to emerge (Leach, 1979). The computer programs developed by Statistical Analysis System (SAS) for observing frequency distributions and sorting by variables were employed in the data analysis process. A measure of the strength of the association was obtained from the contingency coefficient (C) which was appropriate for $k \times c$ contingency tables. The expected frequencies were computed from the marginal totals rather than on a prior hypothesis. The chi-square statistic tested for the null hypothesis that the level of adolescent drinking was independent of parental variables and contextual variables.

However, the findings are presented for both the null and directional hypotheses.

Three separate analyses were conducted. First, the parental variables for support, induction, coercion, and power and the five context variables (sex of parent, age of parent, education of parent, number of siblings and sex of child) were analyzed separately in relation to adolescent drinking level. Secondly, to test the hypotheses which focused upon specific differences between the interaction patterns of mother-child and father-child, sex of parent was later controlled while examining the relationship of the dependent variable (adolescent drinking) to the independent variables (support, induction, coercion, and power). Thirdly, the data were sorted by power, which allowed for a closer examination of social exchange-power theory. During this step, sex of parent also was controlled to highlight father and mother power differences.

The parental variables of support, induction, coercion, and power are presented separately, followed by the findings about the contextual variables and attitudes. The order of discussion is not necessarily the order of the hypotheses.

Parental Variables and Adolescent Drinklevel

Appropriate adolescent drinking level was hypothesized to be related to (a) high parental support, especially high father support; (b) high parental induction, especially high mother induction; (c) low parental coercion, especially low mother coercion; and (d) high parental power, especially high father power. The results, however, indicated that appropriate adolescent consumption of alcohol was

related only to low father induction, high and low father coercion, and high mother power. Power of the parent emerged as an important variable, however, in its interaction with some independent variables. Although the tables show drinklevel trichotomized as low, medium, and high, appropriate adolescent drinking was defined as a combination of low and medium. Inappropriate drinking was defined as high drink-level.

Support and Adolescent Drinking

Hypothesis 1, which stated that greater parental support would be related to more appropriate adolescent drinking, was rejected. The statistics for the contingency table of adolescent drinking level and parental support produced a χ^2 of 3.347 (df=4, p=0.50) (See Table 2). The adolescent group with high parental support, predicted to be associated with appropriate drinking actually had a greater number (24) of inappropriate drinkers than expected (20.9), though not to a significant degree. The direction of difference was opposite from the hypothesized direction.

Parental Support by Sex. When controlling for sex of parent, Table 3 illustrates almost twice as many mothers (94) as fathers (50) were perceived to give high support whereas more than twice as many fathers (95) as mothers (41) were perceived to give low support (See Totals). Hypothesis 5 proposed that greater support by fathers would likely be related to appropriate drinking by adolescents. This hypothesis was not supported. Again, there was no relationship between support and adolescent drinking even when sex of parent was controlled. For drinklevel by fathers' support, the chi square test yielded a

Table 2

Frequencies and Percentages of Parental Support by Adolescent Drinklevel

		Parental Support			Total
		Low	Medium	High	
Drinklevel					
Appropriate	Low Abstinence and Infrequent	18 ^a 14.2 ^b 46.15 ^c 26.09 ^d	10 11.9 25.64 17.24	11 12.9 28.21 17.46	39
	Medium Light and Moderate	29 32.0 32.95 42.03	31 26.9 35.23 53.45	28 29.2 31.82 44.44	88
Inappropriate	High Moderate/ Heavy and Heavy	22 22.9 34.92 31.88	17 19.2 26.98 29.31	24 20.9 38.10 38.10	63
Total		69	58	63	190

chi square = 3.347

df = 4

p = 0.502

C = 0.132

No significant relationship

Table 3

Frequencies and Percentages of Parental Support by Sex and Adolescent Drinklevel

Drinklevel		Parental Support					
		Low		Medium		High	
		Fathers	Mothers	Fathers	Mothers	Fathers	Mothers
Appropriate	Low	21 ^a	10	7	8	11	21
	Abstinence and Infrequent	19.4 ^b	8.4	9.4	11.4	10.2	19.2
		22.11 ^c	24.39	15.22	14.29	22.0	22.34
	Medium	46	19	21	28	22	42
	Light and Moderate	44.3	19.1	21.4	26.1	23.3	43.8
		48.42	46.34	45.65	50.0	44.0	44.68
Inappropriate	High	28	12	18	20	17	31
	Moderate/ Heavy and Heavy	31.3	13.5	15.2	18.5	16.5	31.0
		29.47	29.27	39.13	35.71	34.0	32.98
Total		95	41	46	56	50	94

No significant relationships

value of 1.849 (df=4, p=0.76). The χ^2 value for mothers' support by adolescent drinking was 2.030 (df=4, p=0.73).

Parental Support by Sex and Power. Fathers' support, even when controlled for power, still did not produce a statistically significant relationship with adolescent drinking (See Appendix E, Table J). Fathers with high power had a chi square value of 5.195 (p=0.27). From the proposed model, adolescent drinking would be predicted to be more appropriate under the conditions of high father support and high father power. The data did not support this model.

Though statistically significant differences between expected drinkers and what was observed did not emerge under various conditions of power, higher fathers' power seemed to attenuate the impact of fathers' support on heavy adolescent drinking. Thus, high father support and high power are more likely to result in more appropriate than inappropriate adolescent drinking.

When examining the relationship of mothers' power on support by drinking, the relationship between support and adolescent drink-level was observed to be the strongest when mother power was low ($\chi^2=8.797$, df=4, p=0.07) as shown in Appendix E, Table K. Of those mothers with low power and high support, 72.22% had adolescents who drank inappropriately. In this mother category, eight adolescents were expected to have a high drinking level, but the actual frequency was 13.

Mothers' support seemed to be related to adolescent drinking when her power was perceived as low and her support medium to high.

Induction and Adolescent Drinking

Hypothesis 2 stated that the greater the parental induction, the greater the likelihood of appropriate adolescent drinking. Table 4 shows parents with high induction had 16 adolescents in the low drinking category and 24 in the medium drinking category, and 24 in the high drinking category. With a χ^2 value of 4.699 (df=4, p=0.32) this hypothesis was rejected. Greater parental induction did not result in a significantly greater than expected number of appropriate (low and medium) drinkers.

Parental Induction by Sex. Controlling for sex of parent; greater maternal induction was predicted to show a positive relationship to appropriate alcohol consumption as stated in hypothesis 7. The χ^2 value for mothers' induction by adolescent drinking was 2.022 (p=0.73); therefore, hypothesis 7 was rejected (See Table 5). Approximately the same percentage of appropriate drinkers appeared in each of the low, medium and high maternal induction groups.

Although no prediction about father induction was made, there was a significant relationship. For the fathers, 25.4 and 18.1 inappropriate drinking adolescents were expected in the low and high father induction groups, respectively. The actual frequencies for these two categories were 18 adolescents in the low induction group and 24 adolescents in the fathers' high induction group. For fathers with low induction, a greater than expected number of appropriate adolescent drinkers emerged. High father induction resulted in a greater than expected number of heavier drinking adolescents. The chi square test

Table 4

Frequencies and Percentages of Parental Induction by Adolescent Drinklevel

Drinklevel		Parental Induction			Total
		Low	Medium	High	
Appropriate	Low Abstinence and Infrequent	15 ^a 15.4 ^b 38.46 ^c 20.00 ^d	8 10.5 20.51 15.69	16 13.1 41.03 25.00	39
	Medium Light and Moderate	40 34.7 45.45 53.33	24 23.6 27.27 47.06	24 29.6 27.27 37.50	88
Inappropriate	High Moderate/ Heavy and Heavy	20 24.9 31.75 26.67	19 16.9 30.16 37.25	24 21.2 38.10 37.50	63
	Total	69	58	63	190

chi square = 4.669

df = 4

p = 0.323

C = 0.155

No significant relationship

Table 5

Frequencies and Percentages of Parental Induction by Sex and Adolescent Drinklevel

Drinklevel		Induction					
		Low		Medium		High	
		Fathers*	Mothers**	Fathers*	Mothers**	Fathers*	Mothers**
Appropriate	Low	13 ^a	8	14	10	12	21
	Abstinence and Infrequent	15.7 ^b	9.6	12.0	12.0	11.2	17.4
		16.88 ^c	17.02	23.13	16.95	21.82	24.71
Inappropriate	Medium	46	24	24	29	19	36
	Light and Moderate	35.9	21.9	27.5	27.5	25.6	39.6
		59.74	51.06	40.68	49.15	34.55	42.35
Inappropriate	High	18	15	21	20	24	28
	Moderate/ Heavy and Heavy	25.4	15.5	19.5	19.5	18.1	28.0
		23.38	31.91	35.59	33.9	43.64	32.94
Total		77	47	59	59	55	85

*Fathers: chi square = 10.222 (df = 4; p = 0.04; C = 0.223)

**Mothers: chi square = 2.022 (df = 4; p = 0.732; C = 0.102)

yielded a value of 10.222, $df=4$, which was significant at $p=0.04$. Though the relationship was weak ($C=0.223$), the direction of the association was negative relative to appropriate drinking and totally unexpected.

Parental Induction by Sex and Power. Further analysis of fathers' and mothers' induction levels and adolescent drinking seemed to yield significant results when controlled for power. A χ^2 value of 12.141 with 4 degrees of freedom was significant at $p=0.016$ for medium power fathers (See Appendix E, Table L). The data seemed to support the existence of a moderately strong ($C=0.466$) relationship between fathers' induction and adolescent drinking behavior when fathers' power was medium. Though a few of the cells are low, the data imply that low or medium father induction combined with medium father power was related to appropriate adolescent drinking, whereas high father induction combined with medium father power was related to inappropriate drinking.

When controlling for maternal power, no relationship between drinklevel and mothers' induction was statistically significant (See Appendix E, Table M). Mothers with high power who were perceived as using a medium amount of inductive childrearing practices produced the smallest percentage of adolescent heavy drinkers. Only 14.29% of those adolescents with high power, medium induction mothers were classified as moderate/heavy and heavy drinkers. This is not appreciably different from the 17.39% of adolescents with high power, high induction mothers who rated themselves as heavier drinkers. Mothers with high power and higher

induction tended to yield a lower percentage of adolescent heavier drinkers (17.39%) than mothers with low power but high induction levels (48.15%).

Coercion and Adolescent Drinking

Hypothesis 3 stated that the greater the parental coercion, the less the likelihood of appropriate adolescent drinking. The obtained χ^2 value was 4.962 (See Table 6). With 4 degrees of freedom, this value did not reach a statistically significant level ($p=0.291$). Though hypothesis 3 was not accepted, differences between expected and observed frequencies were in the direction predicted.

Parental Coercion by Sex. Other studies have shown an association between mothers' coercive childrearing behaviors and adolescent alcohol usage. Hypothesis 6 stated that the greater the maternal coercion, the less the likelihood of appropriate adolescent drinking. In the mothers' high coercion column (See Table 7), the largest difference in actual and expected cases occurred with the abstaining and infrequent drinking adolescents. A greater than expected number of adolescents were in this cell, but the chi square was not significant at $p=0.822$. Hypothesis 6 was not supported. Instead, the data seem to support the notion that the greater mothers' coercion, then the greater the likelihood of appropriate adolescent drinking.

Table 7 also shows that of those fathers perceived as high in coercion, a much greater than expected number of low drinking adolescents was obtained (16 vs. 11.0). The chi square value for fathers' coercion by drinklevel was significant at the $p<.05$ level.

Table 6

Frequencies and Percentages of Parental Coercion by Adolescent Drinklevel

Drinklevel		Parental Coercion			Total
		Low	Medium	High	
Appropriate	Low Abstinence and Infrequent	11 ^a 14.6 ^b 28.21 ^c 15.49 ^d	12 12.1 30.77 20.34	16 12.3 41.03 26.67	39
	Medium Light and Moderate	37 32.9 42.05 52.11	23 27.3 26.14 38.98	28 27.8 31.82 46.67	88
Inappropriate	High Moderate/ Heavy and Heavy	23 23.5 36.51 32.39	24 19.6 38.10 40.68	16 19.9 25.40 26.67	63
Total		71	59	60	190

chi square = 4.962

df = 4

p = 0.291

c = 0.160

Table 7

Frequencies and Percentages of Parental Coercion by Sex and Adolescent Drinklevel

Drinklevel		Coercion					
		Low		Medium		High	
		Fathers*	Mothers	Fathers*	Mothers	Fathers*	Mothers
Appropriate	Low	14 ^a	10	9	13	16	16
	Abstinence and Infrequent	15.3 ^b	12.3	12.7	13.3	11.0	13.5
		18.67 ^c	16.67	14.52	20.0	29.63	24.24
		Medium	42	29	25	29	22
	Light and Moderate	34.9	28.0	28.9	30.3	25.2	30.8
		56.0	48.33	40.32	44.62	40.74	46.97
Inappropriate	High	19	21	28	23	16	19
	Moderate/ Heavy and Heavy	24.7	19.8	20.5	21.4	17.8	21.8
		25.33	35.0	45.16	35.38	29.63	28.79
Total		75	60	62	65	54	66

*Fathers: chi square = 10.001 (df = 4; p = 0.039; C = 0.224)

Once again, the direction of difference appeared to be opposite of what would be expected as based upon the literature, but for low coercive fathers, a less than expected number of heavier drinking adolescents was observed (19 vs. 24.7). Thus, at least for fathers with low coercion, the findings were consistent with the literature.

Closer examination of the contingency table showed that the relationship between drinklevel and fathers' coercion appeared to be curvilinear. Of those fathers with low, medium and high levels of coercion, the percentages of inappropriate drinking adolescents were 25.33, 45.16 and 29.63, respectively. Medium coercion by fathers was more likely to result in moderate/heavy and heavy drinking by adolescents whereas low fathers' coercion was least likely to result in inappropriate drinking.

Parental Coercion by Sex and Power. Analyzing mother and father coercion while sorting by parental power again seemed to produce a significant relationship ($p=0.08$) between fathers' coercion and adolescent drinking level when fathers' power was medium (See Appendix E, Table N). With a C value of 0.357, this relationship was not very strong. Of those low coercive fathers with medium power, a much less than expected number of heavier adolescent drinkers was observed (3 vs. 6.4), but for the medium coercive fathers, a much greater than expected number of inappropriate drinkers emerged (10 vs. 6.1). Thus, the significant relationship between fathers' coercion and adolescent drinking level seemed to hold only when fathers' power was medium. Mothers' coercion was not statistically significant at any of the three levels (See Appendix E, Table O).

Power and Adolescent Drinking

In social-exchange theory, power is viewed as a social construct, not a parental behavior. Social-exchange theory proposes the greater the parental power, the greater the likelihood of adolescent compliance. Hypothesis 4 stated that the greater the parental power, the greater the likelihood of appropriate adolescent drinking. The statistics for the contingency table (See Table 8) of power by drinking level did not support this hypothesis ($\chi^2=3.416$, $df=4$, $p=0.49$).

Yet the direction of difference between observed and expected was congruent with the literature. Low power parents had a greater than expected number of heavier drinkers (28 vs. 23.2) which accounted for 40.00% of the total number of adolescents in the low power column. High power parents had a less than expected number of heavier drinking adolescents (15 vs. 19.6). Of those adolescents with high power parents, only 25.42% fell into the inappropriate drinking cell.

Parental Power by Sex. Hypothesis 8 stated that the greater the paternal power, the greater the likelihood of appropriate adolescent drinking. For fathers' power by adolescent drinking level, the chi square test of dependency yielded a value of 3.029. For 4 degrees of freedom, the probability level was 0.553. Hypothesis 8 was rejected. Based on the contingency table distribution (See Table 9), fathers with low power were expected to have 22.8 heavier drinking adolescents. The actual number was 26. Likewise, the high power fathers were expected to have 21.8 inappropriate drinkers, but the observed number was 18.

Table 8

Frequencies and Percentages of Parental Power by Adolescent Drinklevel

Drinklevel		Parental Power			Total
		Low	Medium	High	
Appropriate	Low Abstinence and Infrequent	12 ^a 14.4 ^b 30.77 ^c 17.14 ^d	14 12.5 35.90 22.95	13 12.1 33.33 22.03	39
	Medium Light and Moderate	30 32.4 34.09 42.86	27 28.3 30.68 44.26	31 27.3 35.23 52.54	88
Inappropriate	High Moderate/ Heavy and Heavy	28 23.2 44.44 40.00	20 20.2 31.75 32.79	15 19.6 23.81 25.42	63
Total		70	61	59	190

chi square = 3.416

df = 4

p = 0.491

C = 0.133

Table 9

Frequencies and Percentages of Parental Power by Sex and Adolescent Drinklevel

Drinklevel		Power					
		Low		Medium		High	
		Fathers	Mothers*	Fathers	Mothers*	Fathers	Mothers*
Appropriate	Low	16 ^a	8	10	18	13	13
	Abstinence and Infrequent	14.1 ^b	13.5	11.4	15.7	13.5	9.8
		23.19 ^c	12.12	17.86	23.38	19.70	27.08
	Medium	27	28	27	34	35	27
	Light and Moderate	32.2	30.8	26.1	35.9	30.8	22.4
		39.13	42.42	48.21	44.16	53.03	56.24
Inappropriate	High	26	30	19	25	18	8
	Moderate/ Heavy and Heavy	22.8	21.8	18.5	25.4	21.8	15.8
		31.68	45.45	33.93	32.47	27.27	16.67
Total		69	66	56	77	66	48

*Mothers: chi square = 11.897 (df = 4; p = 0.018; C = 0.242)

Mothers' power was significantly related to adolescent drinking ($\chi^2=11.897$, $df=4$, $p=0.018$). However, no directional hypothesis was made. Mothers with low power were more likely to have inappropriate, than appropriate, drinking adolescents whereas the opposite was found for high power mothers. Of those mothers with low power, 45.45% had heavier drinking adolescents (30 observed vs. 21.8 expected). Of those mothers perceived as having high power, only 16.67% had inappropriate drinking adolescents (8 observed vs. 15.8 expected). Though a definite positive association exists, the strength of the relationship was fairly weak ($C=.242$).

Contextual Variables

Sex of Adolescent

Almost twice as many males (41) as females (22) were inappropriate drinkers, whereas about twice as many females (82) as males (45) maintained an appropriate level of alcohol consumption (See Table 10). The relationship between sex of adolescent and drinking behavior was significant at the $p<0.001$ level ($\chi^2=15.433$, $df=2$); however, the strength of the relationship was low ($C=.27$). Hypothesis 9, which stated girls are more likely than boys to drink appropriately, was supported.

Number of Siblings

Data analysis shown in Table 11 for adolescent drinking level by number of siblings produced a χ^2 value of 0.995, which was not significant ($df=4$, $p=0.92$). Hypothesis 10, which stated the greater the number of children in a family, the less the likelihood of appropriate adolescent drinking, was rejected.

Table 10

Frequencies and Percentages of Sex of Adolescent by Adolescent Drinklevel

Drinklevel		Sex		Total
		Male	Female	
Appropriate	Low Abstinence and Infrequent	12 ^a 17.7 ^b 30.77 ^c 13.95 ^d	27 21.3 69.23 25.96	39
	Medium Light and Moderate	33 39.8 27.50 38.37	55 48.2 62.50 52.88	88
Inappropriate	High Moderate/ Heavy and Heavy	41 28.5 65.08 47.67	22 34.4 34.92 21.15	63
Total		87	104	191

chi square = 15.433

df = 4

p = 0.0004

C = 0.274

Table 11

Frequencies and Percentages of Number of Siblings by Adolescent Drinklevel

Drinklevel		Siblings			Total
		0-1	2	>2	
Appropriate	Low Abstinence and Infrequent	13 ^a 15.2 ^b 33.33 ^c 17.57 ^d	12 12.1 30.77 20.34	18 11.7 35.90 24.56	39
	Medium Light and Moderate	36 34.3 40.91 48.65	27 27.3 30.68 45.76	25 26.4 28.41 43.86	88
Inappropriate	High Moderate/ Heavy and Heavy	25 24.5 39.68 33.78	20 19.6 31.75 33.90	18 18.9 28.57 31.58	63
Total		74	59	57	190

chi square = 0.995

df = 4

p = 0.911

C = 0.072

Age of Parents

Hypothesis 11 predicted the older the parents, the less the likelihood of appropriate adolescent drinking. Mothers' and fathers' age was analyzed separately to determine if sex of parent was also a factor. For both mothers and fathers, age was not significantly related to adolescent drinking behavior. As seen in Table 12, both older fathers and mothers had only 2 observations in the inappropriate drinking categories.

Education of Parents

Hypothesis 12 stated that the higher the education of parents, the greater the likelihood of appropriate adolescent drinking. Since middle-class and white-collar workers are believed to use less coercive and more supportive childrearing techniques than blue-collar workers, a corresponding difference in adolescent alcohol consumption should be observed. Neither mothers' nor fathers' education was statistically related to adolescent drinking (See Table 13).

As a matter of fact, adolescents with low educated mothers and fathers had a decreasing alcohol consumption rate, with the percentage of heavier drinkers being (18.75 and 12.50) less than half of the reported percentages of heavier adolescent drinkers for medium (32.93 and 33.33) and high educated (35.87 and 35.71) mothers and fathers. Once again, the direction of change was in the opposite direction predicted.

Attitudes and Modeling

In view of the overwhelming data from the research literature substantiating the influence of parents' and peers' drinking behaviors

Table 12

Frequencies and Percentages of Age of Parents by Sex and Adolescent Drinklevel

Drinklevel		Age					
		Younger		Middle		Older	
		Fathers	Mothers	Fathers	Mothers	Fathers	Mothers
Appropriate	Low	20 ^a	26	15	11	4	2
	Abstinence and Infrequent	17.9 ^b 51.28 ^c 22.99 ^d	23.6 66.67 22.61	17.7 38.46 17.44	13.8 28.21 16.42	3.5 10.26 23.53	1.6 5.13 25.00
	Medium	38	48	39	36	11	4
	Light and Moderate	40.3 43.18 43.68	53.3 54.55 41.74	39.8 44.32 45.35	31.0 40.91 53.73	7.9 12.50 64.71	3.7 4.55 50.00
Inappropriate	High	29	41	32	20	2	2
	Moderate/ Heavy and Heavy	28.8 46.03 33.33	38.1 65.08 35.65	28.5 50.79 37.21	22.2 31.75 29.85	5.6 3.17 11.76	2.7 3.17 25.00
Total		87	115	86	67	17	8

Younger = less than 46 Middle = 46-57 Older = greater than 57

No significant relationships

Table 13

Frequencies and Percentages of Education of Parents by Sex and Adolescent Drinklevel

Drinklevel		Education					
		Low (<9 years)		Medium (>9,<16)		High (college graduate)	
		Fathers	Mothers	Fathers	Mothers	Fathers	Mothers
Appropriate	Low Abstinence and Infrequent	7 ^a 3.3 ^b 17.95 ^c 43.75 ^d	4 1.6 10.26 50.00	17 16.8 43.59 20.73	23 25.9 58.97 18.25	15 18.9 38.46 16.30	12 11.5 30.77 21.43
	Medium Light and Moderate	6 7.4 6.82 37.50	3 3.7 3.41 37.50	38 38.0 42.18 46.34	61 58.4 69.32 48.41	44 42.6 50.00 47.83	24 25.9 27.27 42.86
Inappropriate	High Moderate/ Heavy and Heavy	3 5.3 4.76 18.75	1 2.7 1.59 12.50	27 27.2 42.86 32.93	42 41.8 66.67 33.33	33 30.5 52.38 35.87	20 18.6 31.75 35.71
Total		16	8	82	126	92	56

No significant relationships

and attitudes, these issues were explored, in a simplistic manner. The analysis was primarily done to help explain adolescent drinking behavior should parental childrearing behaviors be weakly or non-significantly related to adolescent drinking. No predictions were made regarding the outcomes.

Though disagreement exists over the relative influence of parents and peers, an emerging viewpoint supports greater parental influence in the early adolescent drinking period followed by a gradual shift of power or influence to the peer group. Following this thought, adolescents in their first year of college would be expected to be influenced more by peers than parents.

Parents' and Friends' Drinking Behavior

Fathers', mothers', and friends' drinking behaviors were positively related to adolescent alcohol consumption (See Appendix F, Table P). The strongest association existed between friends' drinking and adolescent drinklevel ($\chi^2 = 81.220$, $df=4$, $p=0.0001$, $C=0.546$). The statistics for fathers' drinking were only slightly stronger than for mothers' drinking.

Abstaining fathers and mothers had almost twice as many adolescents in the heavier drinking cells as in the low drinking blocks, whereas in the abstaining friends' column, 87.50% of the adolescent drinkers were in the low drinking cell. This finding, in addition to the stronger statistics, strongly suggests the relatively greater influence of peers to parents with college freshmen in regard to alcohol consumption.

Parents' and Friends' Drinking Attitudes

The attitudes of mothers and friends toward adolescents' drinking of alcoholic beverages were significantly related (See Appendix F, Tables Q,R, and S). Again, the statistics and observations indicated the greater influence of friends' attitude than of mothers' attitude. Almost three times as many fathers disapproved as approved. Sixty-seven of the drinkers' friends were neutral, neither approving nor disapproving, compared to 27 and 23 drinkers who perceived their fathers and mothers as neutral. Though it seemed drinking behavior was a stronger source of influence than attitude, controlling for attitude may produce different results.

Drinking Behaviors by Attitudes

When controlling for attitudes, a significant relationship between fathers' drinking and adolescent alcohol consumption emerged (See Appendix F, Table R). Abstaining but disapproving fathers had twice as many low drinking adolescents as were expected. Furthermore, high-drinking but disapproving fathers had only 29.17% of their adolescents drink appropriately compared to 39.74% of those adolescents with high-drinking fathers without controlling for attitude.

No relationship was found between mothers' drinking and adolescent drinking when controlling for mothers' attitude, indicating the previously found association between mothers' drinking and adolescent drinking may be a spurious relationship caused by mothers'

attitude. If so, then mothers' attitude has more impact than mothers' drinking upon adolescent alcohol consumption.

Judging from the percentages of inappropriate adolescent drinkers when looking at the influence of friends' drinking while controlling for parental attitude it appears that parental disapproval has a moderating effect on the influence of friends' drinking (See Appendix F, Tables T and U). An approximately 20.00% difference was observed in those adolescent drinkers with high drinking friends under the condition of fathers' and mothers' disapproval as compared to approval of adolescent drinking.

Controlling for Power

When examining the relationship between adolescent drinking and (a) parents' attitude and (b) friends' drinking while controlling for power, too many cells were too low to interpret the data with confidence (See Appendix F, Tables V, W, X, and Y). In light of this concern, when viewing percentages of inappropriate drinkers as compared to differences between expected and observed numbers, the data seemed to indicate that high parental power enhanced the effect of parental disapproval and moderated the influence of friends' drinking. Fathers and mothers who disapproved and who were rated as high in power had a smaller percentage of heavier drinking adolescents than disapproving parents with low power. The percentages of those students with heavy-drinking friends who also were heavier drinkers themselves descended as fathers' and mother's power increased.

CHAPTER V

DISCUSSION OF THE RESULTS

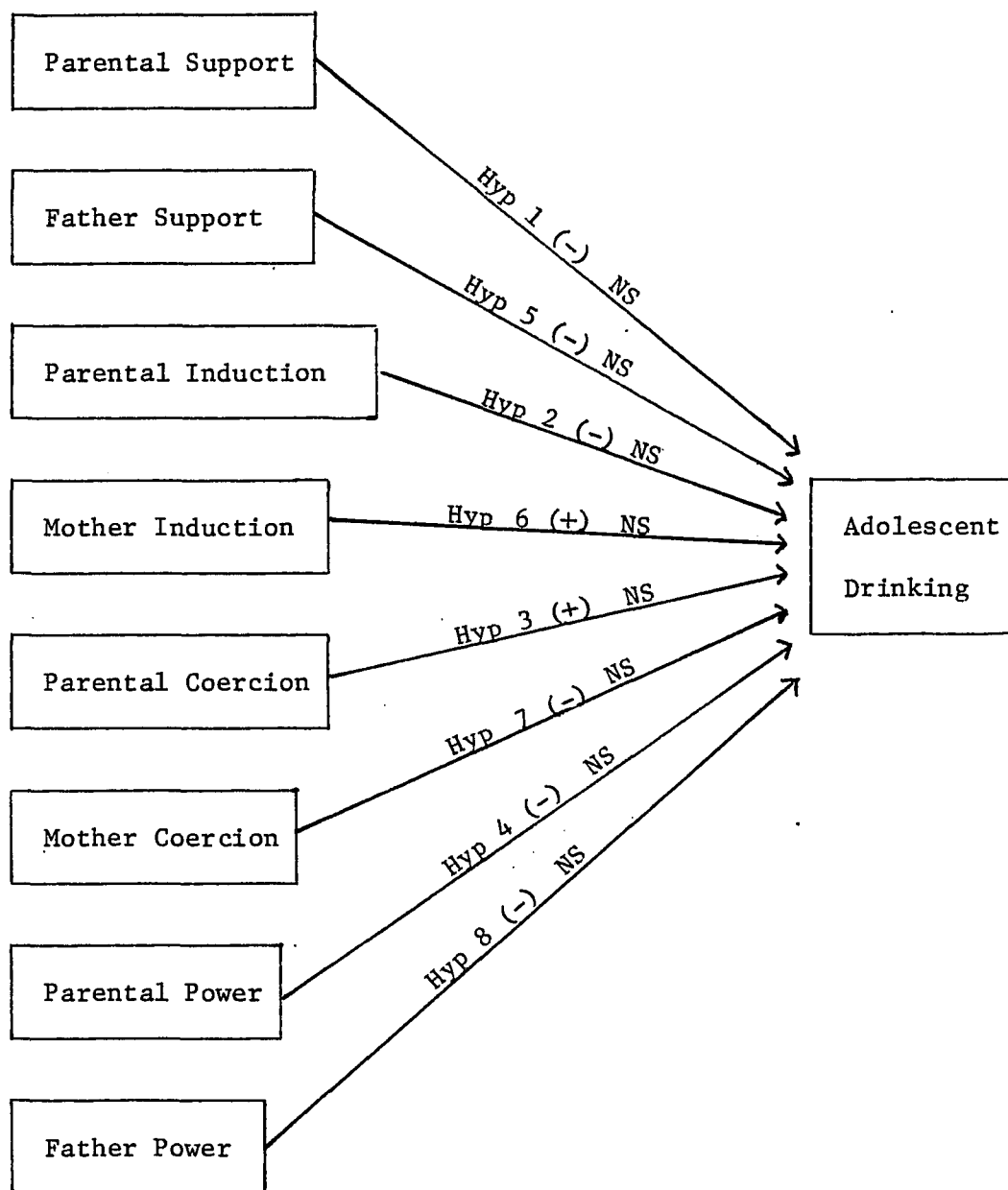
Parental childrearing practices and perceived parental power apparently are associated with appropriateness of adolescent drinking only under certain conditions. Analysis of each broad independent variable (support, induction, coercion, and power) with adolescent drinking showed a low and nonsignificant association. Of the eight hypothesized relationships involving perceived parental childrearing behaviors/parental power and adolescent drinking, none attained a level of significance. Figure 2 illustrates the hypothesized relationships between levels of parental childrearing behaviors/parental power and levels of adolescent drinking.

Significant relationships between the perceived parental childrearing variables/parental power and adolescent drinking were obtained, but under conditions different from that hypothesized. Figures 3 through 6 present the significant interactions of the perceived parental childrearing variables and parental power with reported appropriate and reported inappropriate adolescent drinking levels. The work "perceived" should be assumed in all independent variables in this discussion.

Proposed Models for Adolescent Drinking

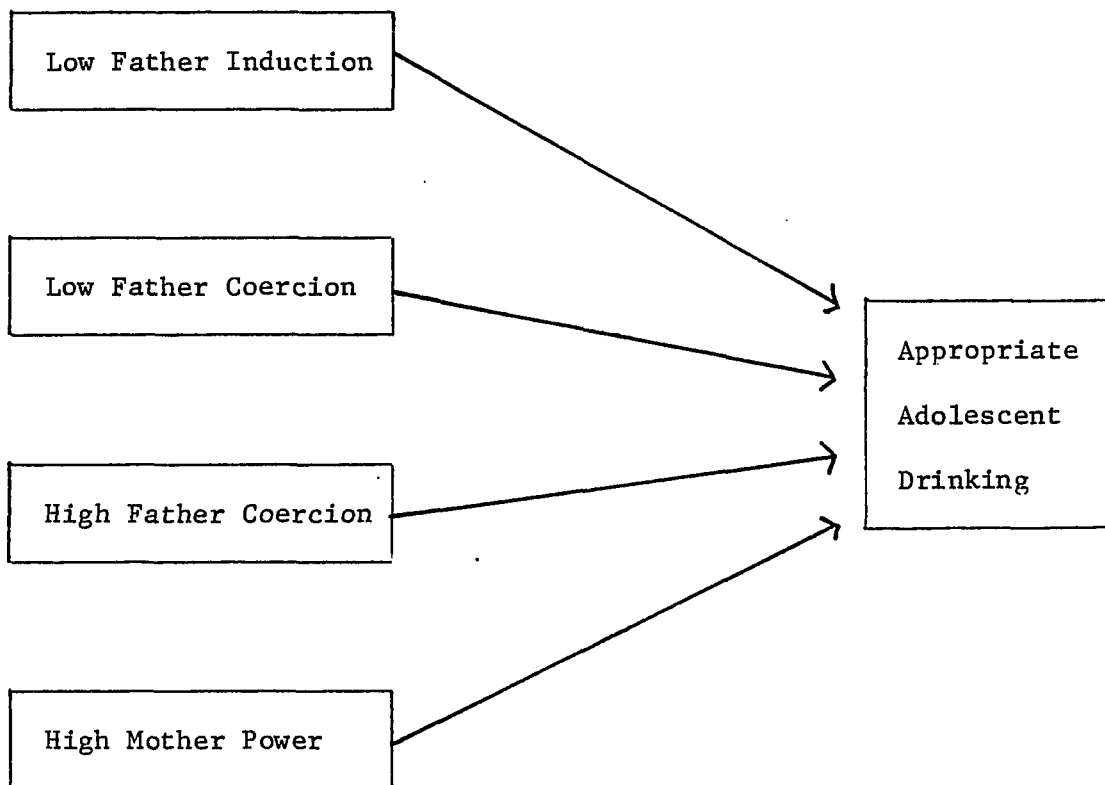
Low father induction, high and low father coercion, and high mother power were significantly related to appropriate adolescent drinking (See Figure 3). When considering inappropriate adolescent

Figure 2. Model of Hypothesized Relationships Between Parental Childrearing Behaviors/Parental Power and Adolescent Drinking



NS=Not Significant

Figure 3. Model of Relationship of Interactions Between Perceived Parental Childrearing Behaviors/Parental Power and Appropriate Adolescent Drinking



drinking as the dependent variable, high father induction, medium father coercion, and low maternal power were significantly related (See Figure 4).

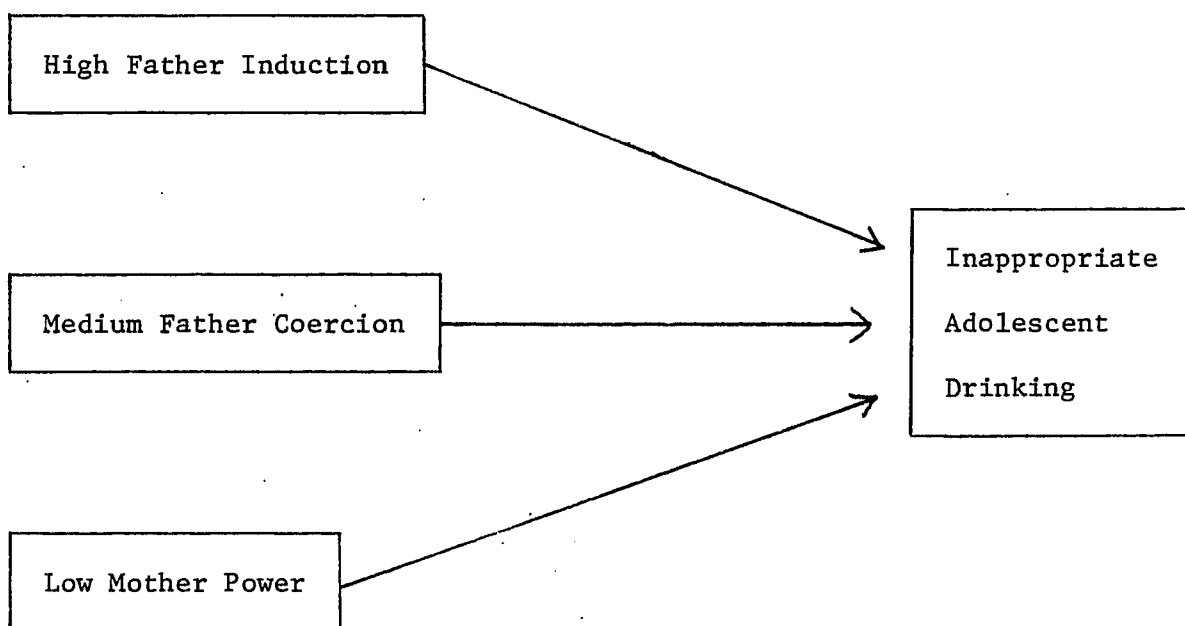
Induction

Greater induction, particularly mother induction, had been hypothesized to result in appropriate adolescent drinking. The data from this study showed the opposite to be true and only for fathers. Though this finding was totally unexpected, at least two explanations are possible.

One plausible explanation is that the induction items really measure more of what Schaefer termed psychological tension. The fact that some of the present induction items loaded on Schaefer's psychological-control scale support this idea. If this be the case, then these conclusions lend some weight to Prendergast and Schaefer's (1974) report of greater psychological control by the father resulting in greater drinking by the adolescent.

An alternative proposal in explaining the seemingly reversed findings relative to induction and adolescent drinking is the value of drinking to the parent. Rollins and Thomas (1979) reported that academic achievement in girls seemed to be facilitated by parental behaviors which lead to social incompetence in other areas. For sons, academic achievement was related to the same parental behaviors which promoted other examples of social competence. They proposed a child's social competence is facilitated by parental support and induction if the parent values such competence in the child. Though perhaps too difficult to pose an analogy between competence and

Figure 4. Model of Relationship of Interactions Between Perceived Parental Childrearing Behaviors/Parental Power and Inappropriate Adolescent Drinking



drinking levels, the data do support the notion that parents generally disapprove of their children using alcohol. Thus, the cloudy findings involving parental support and induction may be due to the lack of value parents place upon any level of adolescent drinking other than abstinence. Part of the problem is that though drinking is sanctioned, no national drinking norm concerning amount exists; therefore, parents may desire abstinence as opposed to their child drinking in the absence of aggressive cultural restrictions. If this proposal is accurate, the relationship of high father induction to inappropriate drinking is due to his value upon other desired adolescent behaviors, and thus, his use of induction. In this case, the argument can be made that adolescent drinking is more related to factors outside the parameters of parental childrearing behaviors.

Coercion

Hypotheses 3 and 6 stated coercion, especially mother coercion, would lead to greater inappropriate drinking. Instead, the present results found medium father coercion related to inappropriate drinking, whereas low and high father coercion were significantly related to appropriate adolescent drinking.

That low induction (fathers') is related to appropriate adolescent drinking is congruent with social power-exchange theory. However, high father coercion should have been related to inappropriate drinking. When controlling for fathers' power, the relationship between high father coercion and adolescent drinking failed to emerge, indicating a spurious relationship. If these findings were to hold with a larger sample, then the statement could confidently

be made that only low father coercion is related to appropriate adolescent drinking, with father power causing a spurious relationship between high father coercion and adolescent drinking.

If this reasoning were true, then social power exchange theory would appear to explain the relationship between father coercion and adolescent alcohol use. Greater (medium) father coercion would result in greater drinking, whereas less (low) coercion would result in less adolescent alcohol consumption.

Support

That neither mother nor father support was related to adolescent drinking could be viewed as important. In terms of social power-exchange theory, a major element is the exchange between parental support and child compliance. The lack of a significant relationship between father and/or mother support and adolescent drinking weakens the explanatory power of social power-exchange theory relative to teenage drinking behavior.

Other researchers (Tudor et al., 1980; Zucker, 1976) have found negative associations between parental support and adolescent alcohol and drug behavior. The present findings failed to corroborate these results. Differences may stem from the methodologies and sample size. Both of the other studies used different instruments to measure support and Zucker correlated each support item to adolescent drinking, whereas in the present study the items were combined into more general dimensions. Prendergast and Schaefer (1974) found rejection to be related to heavier adolescent drinking. From the conclusions of Ellis et al. (1976), support and rejection

are not opposite ends of the same dimension; in fact, Prendergast and Schaefer's rejection scale was relabeled a type of control. Hence, adolescent drinking may be more of a result of father or mother control attempts than of parental support.

Power

As theorized, power is a factor in adolescent alcohol consumption, but as opposed to father power, mother power was significantly related to adolescent drinking level. High mother power was related to appropriate drinking whereas low mother power was associated with inappropriate alcohol consumption.

Controlling for Power

Power is a salient aspect of social power-exchange theory. This view appears to be supported when the relationship between parental childrearing behaviors and adolescent drinking was investigated while controlling for parental power (See Figures 5 and 6).

Mother Power

Though the cell counts were low, when controlling for mother power, mother support seemed to emerge as a significant component of the appropriateness of adolescent drinking model. Medium mother support combined with low mother power was related to appropriate adolescent alcohol consumption. High mother support and low mother power were associated with inappropriate drinking. Thus, maternal support was a factor in adolescent drinking only under the condition of low mother power. These tenuous findings are surprising because from social power exchange theory, the most effective socialization

Figure 5. Model of Relationship of Interactions Between Perceived Parental Childrearing Behaviors and Appropriate Adolescent Drinking When Controlled for Parental Power

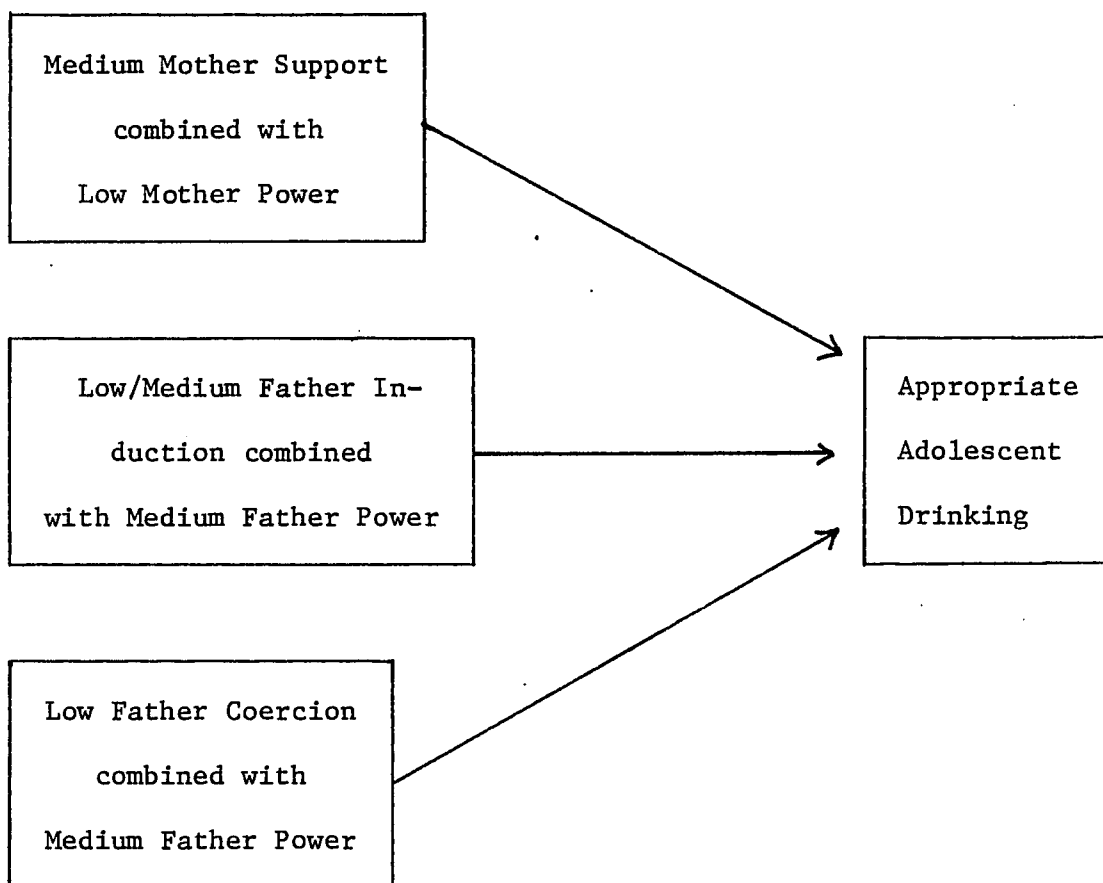
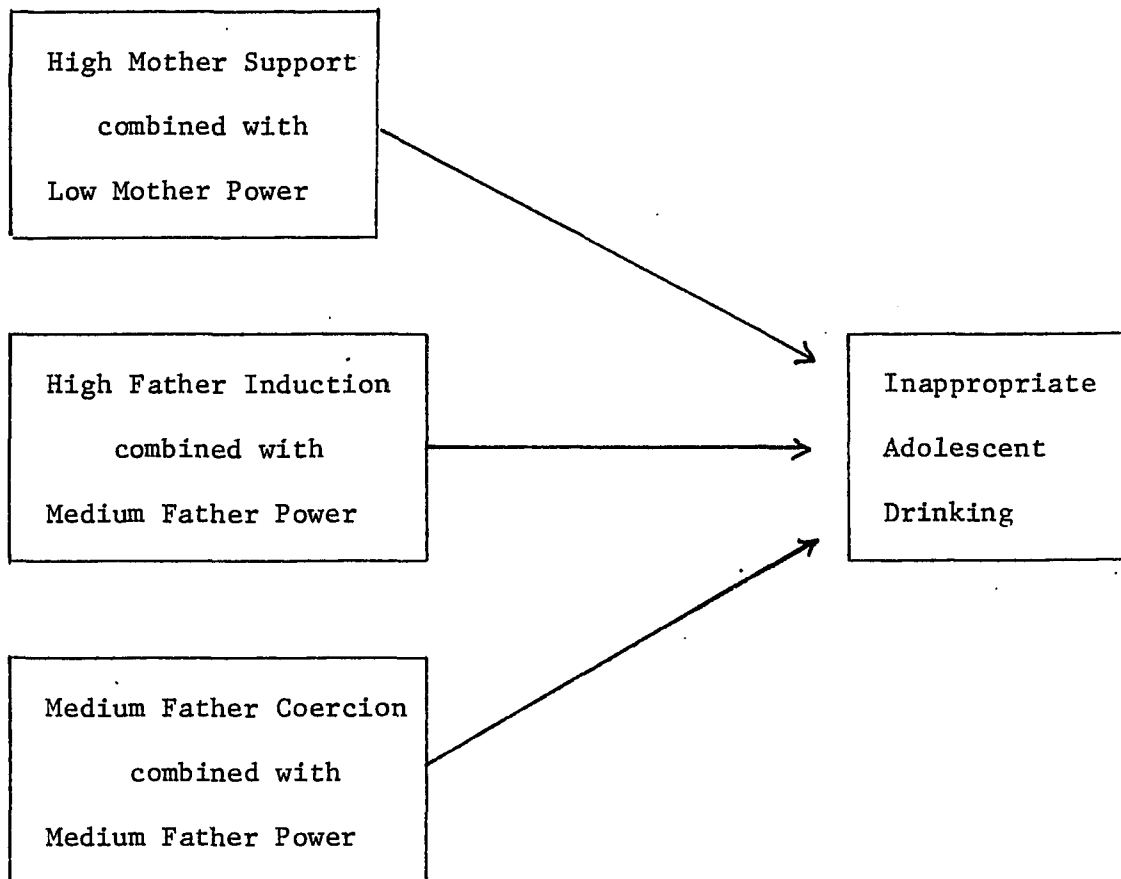


Figure 6. Model of Relationship of Interactions Between Perceived Parental Childrearing Behaviors and Inappropriate Adolescent Drinking When Controlled for Parental Power



strategy relative to support and power was high support combined with high power (Rollins & Thomas, 1975).

Making these findings more problematic were the significant correlations between (a) high perceived mother power and appropriate adolescent drinking and (b) mother power and mother support (See Appendix F). But, the findings of high mother support plus low mother power relating to inappropriate drinking and of medium mother support plus low mother power resulting in appropriate adolescent drinking represent only a small percentage of mother support/mother power observations. These seemingly confusing results can be further explained by social power-exchange theory. Social power-exchange theory posits that the effect of parental support on child compliance is dependent upon the importance of the support to the child. Furthermore, the degree of importance of support is contingent upon the availability of alternative sources of support and of the power of the supportive person over the child.

Father Power

Though high father induction and medium father coercion were significantly related to inappropriate adolescent drinking, when controlling for paternal power, these conditions seemed to hold only for medium powerful fathers. Likewise, low father induction and coercion were associated with appropriate adolescent drinking when father power was medium. Medium father induction and high father coercion seemed to emerge as a significant childrearing variable for inappropriate drinking when father's power was perceived as medium. From these results it seems power was an integral part of

the interaction between childrearing behaviors and adolescent alcohol consumption.

Social Power-Exchange Theory

To an extent, these findings can be discussed and at least partially, but speculatively, explained by social power-exchange theory. Rollins and Thomas (1979) discussed the possibility of curvilinear relationships between child compliance and parental control attempts in trying to explain discrepancies reported in the literature. The present findings would seem to support the existence of a curvilinear relationship, with father coercion and also with the contingency variable power. Various levels of parental induction and coercion combined with medium power appeared to produce optimal conditions for both appropriate and inappropriate adolescent drinking. Congruent with social power-exchange theory, power is a key factor in the interplay of parental control attempts and child compliance.

Social power-exchange theory posits that effective socialization is maximized by high parental power. Judging from the statistically significant relationship between high maternal power and appropriate adolescent drinking, this would appear to be the case. Yet, when examining parental childrearing behaviors while controlling for power, medium power seemed to emerge as most relevant in significant interactions with parental control attempts. But, when viewing the data from another perspective, high power appears to be eminently important. Across the three levels of all childrearing variables, the percentage of inappropriate drinkers in the same level decreased as power

increased. For example, of those fathers with high support/low power, 66.6% of the adolescents were heavy drinkers, compared to 41.67% of adolescents with high support/medium power fathers and 28.57% of adolescents with high support/high power fathers. Such a perspective is inconsistent with a curvilinear proposition.

It appears power possibly has a twofold function. Power seems to function as a salient contingency variable between childrearing behaviors and adolescent drinking, generally inhibiting consumption from low to high levels of power across all childrearing variables and optimally interacting at a medium level. As an autonomous social construct, parental power seems to function in decreasing adolescent drinking.

In another adolescent alcohol and drug use study, Tudor et al. (1980) used a condensed version of Smith's (1970) social power scale. The present study used Smith's scale as modified by McDonald (1977) to measure parental power. Tudor and his colleagues failed to find any relationship between parental influences (power) and adolescent substance use. Once again, differences in the instrument may account for the conclusion of power as an important variable in the present study.

Social Learning Theory

Much of the data appears to be confusing and hard to interpret, especially in light of the small sample size. Perhaps part of the problem lies with the dependent variable. The entire issue of adolescent drinking is wrought with inconsistencies. Social power-exchange theory has been previously used to explain child compliance

and this paper has assumed appropriate adolescent drinking to be more accepted by parents. The fact that most parents disapprove of their child consuming alcohol supports this assumption. Yet, drinking is a culturally approved activity, and an activity many consider to be a rite of passage into adulthood. In this regard, adolescents may have little choice whether to drink or not, and little choice about how much to drink, which may be more contingent upon the reference group. Cohen (1968) made the point that exchange theory was most successfully applied when real options exist. Adolescent drinking normally occurs within the context of a group, meaning not only that drinking is perceived as a prerequisite to adulthood, but that the group provides acceptance and source of identity for the adolescent. Hence, the entire context of adolescent drinking meets basic adolescent needs, effectively eliminating choices and perhaps rendering an explanation of adolescent drinking based upon an exchange of parental behaviors virtually useless.

Adding to the complexity is the uncertainty, even in light of verbal disapproval, parents exhibit toward adolescent drinking. As a case in point, some parents disapprove of their adolescent drinking, but yet feel relieved when discovering their child uses only alcohol as opposed to drugs. Another contradiction exists when it is considered that most young people have their first drink in the home. This presents an interesting point posed by Chadwick-Jones (1976): what about the parent's role as an exemplar within an exchange concept? Data from this project illustrate the greater ability of parents' and friends'

attitude and drinking behavior than of parent's childrearing behaviors in explaining adolescent drinking.

The social learning theory model of deviant behavior (crime, delinquency, addiction, abuse, etc.) developed by Burgess and Akers (See Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979) stated social behavior is a result of operant conditioning and modeling of others' behavior. The differential reinforcement principle is that behavior is influenced by rewards or punishments and the rewards and punishments for alternative behaviors. In addition, various groups control major sources of reinforcement and punishment. Two important groups with which one is in differential association are the friendship groups and the family. From these groups one learns evaluative definitions (norms, attitudes, orientations) of the behavior as good or bad.

From social learning theory, for adolescent alcohol use, the frequency of use increases with greater exposure to using rather than to abstinent models, with more association with using than with abstinent peers and adults, with differential reinforcement (more rewards, fewer costs) with use over abstinence, and with more positive and neutralizing rather than negative definitions of use.

The present data support this model. In particular, friends' drinking behavior and attitude appeared to be a powerful influence on adolescent drinking. Of course, to some extent, adolescents may select those individuals with similar attitudes and behaviors. Mothers' definition of adolescent alcohol use, her attitude, and fathers' drinking behavior were significant contributing factors of

adolescent alcohol consumption. Akers et al. (1979) found differential association and definitions to have the greatest explanatory value of adolescent alcohol consumption. That differential association explained more variance than reinforcement, definitions, and imitations; they stated that additional variables beyond those identified by social learning theory may be at work in the friend-adolescent or parent-adolescent interaction--perhaps childrearing variables.

Cautions and Limitations

Other factors related to the results include sample and methodology. The sample may not appear to be representative, and reflects the Southeastern seaboard populace. Different parental characteristics may have contributed to the differences in findings relative to sex of parent between this study and other research. The parental behaviors questionnaire employed in this research was different from ones used in other studies of childrearing behaviors and adolescent drinking. A factor analysis to determine how the parental childrearing items clustered was not done. Such a procedure could possibly have explained some of the unexpected findings, particularly the opposite findings of support and induction. It was also unlikely the subjects answered the questions based upon the notion of desired parental characteristics, because power and coercion were significant, as hypothesized, but involving the opposite sex parent. The same items designed for analysis by a regression-type procedure may have yielded different results.

So many analyses were done in the present study that these few findings may only be chance findings. The strength of some of

the significant relationships were relatively weak. Furthermore, the number of expected observations in some of the cells in which significance was found was low and the number of low cells was too large when controlling for sex of parent and power. Thus, the interpretation and discussion of the observed significant relationships between adolescent drinking and parental childrearing variables or parents'/friends' drinking level when controlling for sex of parent and power must be suspect and treated with caution.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The major purposes of this study were (a) to investigate the relationships between parental childrearing variables and adolescent alcohol consumption and (b) to explore the ability of social exchange-power theory to explain the relationships. The parental variables investigated were support, control (induction and coercion), and power perceived by the adolescent.

Questionnaires were completed by 87 males and 104 female freshman college students attending either a moderate-sized state university or a community college in a progressive rural area of the southeastern seaboard. Approximately 85% of the sample was 18 years of age. Class sections of a required freshman-level course were selected for representativeness giving additional consideration to day of the week and time of day. Students had been assigned by the institutions on a random basis to the class sections.

The data obtained were analyzed by the chi square test of independence with the contingency coefficient employed as a measure of the strength of the association. Antecedent variables except gender were trichotomized into low, medium and high levels. Each of the parental variables was studied first by combining data about mothers and fathers. Later the analyses controlled for parent and power. Gender of adolescent, size of family, age of parents, and

education of parents were also analyzed. Adolescent alcohol consumption was trichotomized as low, medium, and high. Low and medium alcohol consumption was referred to in this study as "appropriate" and high consumption as "inappropriate."

Summary of the Findings

The hypothesized relationships between parental variables and level of adolescent drinking were not supported. However, further analyses and inspection of the data revealed some relationships. The social exchange-power theory seemed to be questionable as an adequate framework for explaining the findings.

Hypothesis 1 was not supported by the results of this study. Greater parental support did not result in less adolescent alcohol drinking. In fact, the observed number of inappropriate drinkers was greater than expected.

Hypothesis 2 stated the greater the parental induction, the greater the likelihood of appropriate adolescent drinking. This hypothesis was rejected. Parental induction did not produce a greater than expected number of appropriate drinkers.

As proclaimed by hypothesis 3, greater parental coercion would be associated with greater inappropriate adolescent drinking. The findings did not support this hypothesis. Not only were the results not significant, but differences between expected and actual observations were in the direction opposite to what was predicted.

Although hypothesis 4 predicted the greater the parental power, the greater the likelihood of appropriate adolescent drinking; this

hypothesis was not supported. However, the findings were in the direction hypothesized.

The data did not support hypothesis 5. Greater father support did not result in a significantly greater number of appropriate adolescent drinkers.

Greater mother coercion was hypothesized to relate to greater inappropriate adolescent alcohol consumption. The results did not support hypothesis 6. Instead, the data seemed to support the opposite: greater mother coercion resulted in less inappropriate drinking than expected.

According to hypothesis 7, the greater the mother induction, the greater the likelihood of appropriate adolescent drinking. This proposed relationship was not supported by the data.

Hypothesis 8, the greater the father power, the greater the likelihood of appropriate adolescent drinking, was not supported. However, the direction of differences between expected and observed number of drinkers was consistent with the hypothesis.

Girls were hypothesized (#9) as more likely than boys to drink appropriately. The data supported this statement. More than twice as many females as males rated themselves as being abstainers or infrequent drinkers.

Family size was proposed to impact on adolescent drinking. Hypothesis 10 stated that the greater number of children in a family, the less the likelihood of appropriate adolescent drinking. This hypothesis was not supported.

Hypothesis 11 projected that the older the parents, the less the likelihood of appropriate adolescent drinking. Age of parent was not a factor in the drinking level of the adolescent; hence hypothesis 11 was rejected.

Hypothesis 12 stated that the higher the education level of the parent, the greater the likelihood of appropriate adolescent drinking. The findings did not support this hypothesis. In fact, lower educated parents tended to have offspring who consumed alcohol at a lower level.

The only hypothesis that was supported was that more girls than boys would drink alcohol appropriately. This is not to imply that no relationships exists between (a) parental childrearing behaviors and power and (b) adolescent drinking levels; neither does it imply that social exchange-power theory cannot explain adolescent drinking behavior. Relationships between the independent variables and adolescent alcohol consumption other than those hypothesized were found to be statistically significant. Highlights of these non-hypothesized but significant findings are as follows:

1. Low father induction was more likely to result in appropriate adolescent alcohol use.
2. Low and high father coercion were more likely to result in appropriate adolescent drinking.
3. High mother power was more likely to result in appropriate use of alcohol by adolescents.
4. Medium mother support combined with low mother power seemed to be related to appropriate drinking.

5. Low and medium father induction combined with medium father power seemed to be related to appropriate adolescent alcohol behavior.

6. Low father coercion combined with medium father power seemed to be related to appropriate adolescent drinking.

Other findings of the study were these: (a) Fathers' and friends' drinking behavior were strongly and positively related to adolescent alcohol consumption. The data indicated that friends exerted the most influence. (b) The drinking attitude of mothers and friends was associated with teenage alcohol use. Greater disapproval resulted in less inappropriate drinking. (c) Significant interaction was observed for fathers' disapproval of adolescent drinking by fathers' drinking behavior in relation to appropriate adolescent drinking. For appropriate teenage drinkers, it appeared that fathers' actions spoke louder than words. (d) Though a strong relationship existed between friends' drinking behavior and adolescent alcohol consumption, greater fathers' and mothers' power appeared to mediate this relationship.

Conclusions

Based on the findings of this study, several conclusions can be drawn involving (a) the relationship between adolescent drinking and parent childrearing practices and (b) the applicability of social exchange-power theory.

First, parental childrearing practices seemed to be related to adolescent alcohol drinking behaviors. Control (induction and coercion) attempts appear to be a primary factor. Though the relationships were

not very strong, low father induction and low father coercion were positively related to appropriate adolescent drinking. High father coercion was negatively associated with appropriate alcohol consumption. Mother support seemed to emerge as a factor only when power was controlled.

Second, the relationships between childrearing practices and adolescent drinking seemed to be governed by sex of parent. The data indicated that fathers exert significant influence through their use of coercion and induction, whereas mothers are more influential with support.

Third, parental power seemed to act as a contingency variable influencing the relationships between the childrearing variables and adolescent alcohol consumption. Furthermore, the influence of power was more prominent when operating on a medium level.

Fourth, power, aside from the contingency characteristic, seemed to function as a mediating force on adolescent alcohol consumption. Across the same level of almost all independent variables, perceived powerful parents had fewer inappropriate adolescent drinkers.

Fifth, parents' and friends' attitude and drinking behavior appeared to be more salient than childrearing characteristics in accounting for teenage alcohol use. Congruency of parents'/friends' attitude and drinking behavior had a strong effect upon adolescent alcohol consumption.

Sixth, social power-exchange theory did not seem to be adequate for explaining adolescent alcohol use. Contrary to one of the major propositions of the theory, parental support was not

exchanged for appropriate adolescent drinking. Though the findings of this research could be partially explained by social exchange-power theory, the significant relationships were not strong and some explanations of the results were speculative.

One other conclusion of this study was noteworthy. Since almost a third of college freshman students drink inappropriately and since alcohol consumption behavior and attitudes of parents and friends were positively related to drinking, it was concluded that modeling theory may be a better explanation than social exchange-power theory.

Recommendations

Based upon the findings of this research, the following recommendations are proposed for future study:

1. Further research about the relationship of parent-child interactions to adolescent alcohol usage should be conducted. In addition, this study should be replicated with high school students using a larger and more heterogeneous sample. A continuous measure of alcohol consumption should be employed in order to explain the variance in adolescent drinking levels.
2. Parental power, particularly in relation to the process of obtaining desired adolescent behaviors, should be further investigated.
3. The relationship of power to other childrearing behaviors should receive more study.
4. The measurement of parental childrearing variables should be further refined.

5. Models of adolescent alcohol consumption incorporating many sources of parental influence should be further developed. Refined models of adolescent drinking behavior could have wide applicability for professionals working in prevention and treatment.

REFERENCE NOTES

1. Permission to survey students was obtained by directly contacting Dr. Rick Barnes, Coordinator of Health Education, Department of Health, Physical Education and Recreation, East Carolina University, and Mr. Edgar Boyd, Dean of Students, Pitt Community College.
2. Several colleagues in the area of alcoholism treatment concurred with these definitions.

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APPENDICES

APPENDIX A
QUESTIONNAIRE FOR ADOLESCENTS

Dear Student

Thank you for accepting the opportunity to participate in my research. The answers you and other students provide will help me to better understand young people and their relation to alcohol drinking. For the information to be beneficial to me, it is important that you answer the items as accurately as possible. Remember that your answers will be completely confidential. At anytime throughout the administration of this survey you may delete any item or refrain from completing the questionnaire.

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P. 104-115 Questionnaire For Adolescents

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APPENDIX B

DISTRIBUTION TABLES OF PERCEIVED PARENTAL VARIABLES:
SUPPORT, INDUCTION, COERCION, AND POWER

Table A

Frequency and Percentage of Perceived Parental Support

Father Support	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	95	95	49.738	49.738
Medium	46	141	24.084	73.822
High	50	191	26.178	100.000

Mother Support	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	41	41	21.466	21.466
Medium	56	97	29.319	50.785
High	94	191	49.215	100.000

Table B

Frequency and Percentage of Perceived Parental Induction

Father Induction	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	77	77	40.314	40.314
Medium	59	136	30.890	71.204
High	55	191	28.796	100.000

Mother Induction	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	47	47	24.607	24.607
Medium	59	106	30.890	55.497
High	85	191	44.503	100.000

Table C

Frequency and Percentage of Perceived Parental Coercion

Father Coercion	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	75	75	39.267	39.267
Medium	62	137	32.461	71.728
High	54	191	28.272	100.000

Mother Coercion	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	60	60	31.414	31.414
Medium	65	125	34.031	65.445
High	66	191	34.555	100.000

Table D
Frequency and Percentage of Perceived Parental Power

Father Power	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	69	69	36.126	36.126
Medium	56	125	29.319	65.445
High	66	191	34.555	100.000

Mother Power	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	66	66	34.555	34.555
Medium	77	143	40.314	74.869
High	48	191	25.131	100.000

APPENDIX C

DISTRIBUTION TABLES OF CONTEXTUAL VARIABLES:
EDUCATION, AGE, AND FAMILY SIZE

Table E

Frequency and Percentage of Parents' Education

Fathers' Education	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	16	16	8.377	8.377
Medium	83	99	43.455	51.832
High	92	191	48.168	100.000

Mothers' Education	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	8	8	4.188	4.188
Medium	127	135	66.492	70.681
High	56	191	29.319	100.000

Table F
 Frequency and Percentage of Parents' Age

Fathers' Age	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low				
34-37	5	5	2.762	2.762
38-41	28	33	15.470	18.232
42-45	44	77	24.309	42.541
Medium				
46-49	33	110	18.232	60.773
50-53	36	146	19.890	80.663
54-57	18	164	9.945	90.608
High				
58-61	8	172	4.420	95.028
62-65	6	178	3.315	98.343
66-69	3	181	1.657	100.000

Mothers' Age	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low				
34-37	16	16	8.511	8.511
38-41	48	64	25.532	34.043
42-45	49	113	26.064	60.106
Medium				
46-49	33	146	17.553	77.660
50-53	23	169	12.234	89.894
54-57	11	180	5.851	95.745
High				
58-61	6	186	3.191	98.936
62-65	1	187	0.532	99.468
66-70	1	188	0.532	100.000

Table G

Frequency and Percentage of Levels of Family Size

Level (No. of Siblings)	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low (0-1)	74	74	38.743	38.743
Medium (2)	59	133	30.890	69.634
High (3 or more)	58	191	30.366	100.000

APPENDIX D

DISTRIBUTION TABLES OF PERCEIVED PARENTS' AND
FRIENDS' DRINKING BEHAVIORS AND ATTITUDES

Table H

Frequency and Percentage of Others' Drinking Behavior

Fathers' Level	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	50	50	27.473	27.473
Medium	54	104	29.670	57.143
High	78	182	42.857	100.000

Mothers' Level	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	86	86	45.263	45.263
Medium	63	149	33.158	78.421
High	41	190	21.579	100.000

Friends' Level	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Low	16	16	8.377	8.377
Medium	45	61	23.560	31.937
High	130	191	68.063	100.000

Table I

Frequency and Percentage of Others' Attitude
Toward Adolescent Drinking

Fathers' Attitude	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Approve	38	38	19.895	19.895
Neutral	27	65	14.136	34.031
Disapprove	90	155	47.120	81.152
Don't Know	36	191	18.848	100.000

Mothers' Attitude	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Approve	25	25	13.089	13.089
Neutral	23	48	12.042	25.131
Disapprove	131	179	68.586	93.717
Don't Know	12	191	6.283	100.000

Friends' Attitude	Frequency	Cumulative Frequency	Percent	Cumulative Percent
Approve	98	98	51.309	51.309
Neutral	67	165	35.079	86.387
Disapprove	14	179	7.330	93.717
Don't Know	12	191	6.283	100.000

APPENDIX E
CONTINGENCY TABLES FOR DRINKLEVEL BY
CHILDREARING BEHAVIORS AND SEX OF PARENT
AND PARENTAL POWER

Table J

Frequencies and Percentages of Father Support by Father Power and Adolescent Drinklevel

Drinklevel		Father Power								
		Low			Medium			High		
		Low Support	Med Support	High Support	Low Support	Med Support	High Support	Low Support	Med Support	High Support
Appropriate	Low	13 ^a	2	1	6	3	1	2	2	9
	Abstinance and Infrequent	12.5 ^b	2.8	0.7	5.2	2.7	2.1	2.4	3.7	6.9
		24.07 ^c	16.67	33.33	20.69	20.00	8.33	16.67	10.53	25.71
Appropriate	Medium	24	3	0	13	8	6	9	10	16
	Light and Moderate	21.1	4.7	1.2	14.0	7.2	5.8	6.4	10.1	18.6
		44.44	25.00	0.00	44.83	53.33	50.00	75.00	52.63	45.71
Inappropri.	High	17	7	2	10	4	5	1	7	10
	Moderate/ Heavy and Heavy	20.3	4.5	1.1	9.8	5.1	4.1	3.3	5.2	9.5
		31.48	58.33	66.67	34.48	26.67	41.67	8.33	36.84	28.57
Total		54	12	3	29	15	12	12	19	35

No significant relationships

Table K

Frequencies and Percentages of Mother Support by Mother Power and Adolescent Drinklevel

Drinklevel		Mother Power								
		Low*			Medium			High		
		Low Support	Med Support	High Support	Low Support	Med Support	High Support	Low Support	Med Support	High Support
Appropriate	Low Abstinence and Infrequent	3 ^a 2.6 ^b 14.29 ^c	3 3.2 11.54	2 2.2 11.11	5 3.5 33.33	3 5.6 12.50	10 8.9 26.32	2 1.1 50.00	2 1.6 33.33	9 10.3 23.68
	Medium Light and Moderate	10 9.0 47.62	15 11.2 57.69	3 3.8 16.67	8 6.6 53.33	9 10.6 37.50	17 16.8 44.74	1 2.3 25.00	4 3.4 66.07	22 21.4 57.89
Inapprop.	High Moderate/ Heavy and Heavy	8 9.4 38.10	8 11.6 30.77	13 8.0 72.22	2 4.9 13.33	12 7.8 50.00	11 12.3 28.95	1 0.7 25.00	0 1.0 0.00	7 6.3 18.42
	Total	21	26	18	15	24	38	4	6	38

*Low Mother Power: chi square = 8.797 (df=4; p=0.064; C=0.345)

Table L

Frequencies and Percentages of Father Induction by Father Power and Adolescent Drinklevel

Drinklevel		Father Power								
		Low			Medium*			High		
		Low Induct	Med Induct	High Induct	Low Induct	Med Induct	High Induct	Low Induct	Med Induct	High Induct
Appropriate	Low	7 ^a	5	4	2	6	2	4	3	6
	Abstinence and Infrequent	8.3 ^b	4.4	3.2	4.3	2.9	2.9	3.3	4.7	4.9
		19.44 ^c	26.32	28.57	8.33	37.50	12.50	23.53	12.50	24.00
Appropriate	Medium	18	6	3	17	4	6	11	14	10
	Light and Moderate	14.1	7.4	5.5	11.6	7.7	7.7	9.0	12.7	13.3
		50.00	31.58	21.43	70.83	25.00	37.50	64.71	58.33	40.00
Inappropri.	High	11	8	7	5	6	8	2	7	9
	Moderate/ Heavy and Heavy	13.6	7.2	5.3	8.1	5.4	5.4	4.6	6.5	6.8
		30.56	42.11	50.00	20.83	37.50	50.00	11.76	29.17	36.00
Total		36	19	14	24	16	16	17	24	25

*Medium Father Power: chi square = 12.141 (df=4; p=0.016; C=0.466)

Table M

Frequencies and Percentages of Mother Induction by Mother Power and Adolescent Drinklevel

Drinklevel		Mother Power								
		Low			Medium			High		
		Low Induct	Med Induct	High Induct	Low Induct	Med Induct	High Induct	Low Induct	Med Induct	High Induct
Appropriate	Low Abstinence and Infrequent	1 ^a 2.1 ^b 5.88 ^c	2 2.6 9.52	5 3.3 18.52	4 4.2 22.22	7 5.6 29.17	7 8.2 20.00	3 3.0 27.27	1 3.8 7.14	9 6.2 39.13
	Medium Light and Moderate	10 7.3 58.82	9 9.0 42.86	9 11.6 33.33	8 7.9 44.44	9 10.6 37.50	17 15.5 48.57	6 6.2 54.55	11 7.9 78.57	10 12.9 43.48
Inapprop.	High Moderate/ Heavy and Heavy	6 7.6 35.29	10 9.4 47.62	13 12.0 48.15	6 5.8 33.33	8 7.8 33.33	11 11.4 31.43	2 1.8 18.18	2 2.3 14.29	4 3.8 17.39
	Total	17	21	27	18	24	35	11	14	23

No significant relationships

Table N

Frequencies and Percentages of Father Coercion by Father Power and Adolescent Drinklevel

		Father Power								
		Low			Medium*			High		
		Low Coercion	Med Coercion	High Coercion	Low Coercion	Med Coercion	High Coercion	Low Coercion	Med Coercion	High Coercion
Drinklevel										
Appropriate	Low	5 ^a	3	8	3	2	5	6	4	3
	Abstinence and Infrequent	5.6 ^b	4.6	5.8	3.4	3.2	3.4	6.3	4.7	2.0
		20.83 ^c	15.00	32.00	15.79	11.11	25.32	18.75	16.67	30.00
Appropriate	Medium	10	8	9	13	6	8	19	11	5
	Light and Moderate	9.4	7.8	9.8	9.2	8.7	9.2	17.0	12.7	5.3
		41.67	40.00	36.00	68.42	33.33	42.11	59.38	45.83	50.00
Inappropri.	High	9	9	8	3	10	6	7	9	2
	Moderate/ Heavy and Heavy	9.0	7.5	9.4	6.4	6.1	6.4	8.7	6.5	2.7
		37.50	65.00	32.00	15.79	55.56	31.58	21.88	37.50	20.00
Total		24	20	25	19	18	19	32	24	10

*Medium Power Fathers: chi square = 8.203 (df=4; p=0.084; C=0.357)

Table 0

Frequencies and Percentages of Mother Coercion by Mother Power and Adolescent Drinklevel

		Mother Power								
		Low			Medium			High		
Drinklevel		Low Coercion	Med Coercion	High Coercion	Low Coercion	Med Coercion	High Coercion	Low Coercion	Med Coercion	High Coercion
Appropriate	Low	0 ^a	2	6	5	7	6	5	4	4
	Abstinence and Infrequent	2.7 ^b	2.5	2.8	4.4	6.3	7.2	4.9	4.9	3.3
		0.00 ^c	10.00	26.09	26.32	25.93	19.35	27.78	22.22	33.33
	Medium	11	8	9	9	9	16	9	12	6
Inapprop.	Light and Moderate	9.5	8.6	9.9	8.4	11.9	13.7	10.1	10.1	6.8
		50.00	40.00	39.13	47.37	33.33	51.61	50.00	66.67	50.00
Inapprop.	High	11	10	8	5	11	9	4	2	2
	Moderate/ Heavy and Heavy	9.8	8.9	10.3	6.2	8.8	10.1	3.0	3.0	2.0
		50.00	50.00	34.78	26.32	40.74	29.03	22.22	11.11	16.67
Total		22	20	23	19	27	31	18	18	12

No significant relationships

APPENDIX F
CONTINGENCY TABLES FOR DRINKLEVEL BY
PARENTS' AND FRIENDS' DRINKING
AND ATTITUDES

Table P

Frequencies and Percentages of Others' Drinking Level by Adolescent Drinklevel

		Others' Drinking Level								
		Fathers*			Mothers**			Friends***		
Drinklevel		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Appropriate	Low	17 ^a	13	5	26	10	2	14	17	8
	Abstinence and Infrequent	9.6 ^b	10.4	15.0	17.2	12.6	8.2	3.3	9.2	26.5
		34.00 ^c	24.07	6.41	30.23	15.87	4.88	87.50	37.78	6.15
	Medium	17	26	42	38	33	18	2	25	62
	Light and Moderate	23.4	25.2	36.4	40.3	29.5	19.2	7.5	21.0	60.6
		34.00	48.15	53.85	44.19	52.38	43.90	12.50	55.56	47.69
Inapprop.	High	16	15	31	22	20	21	0	3	60
	Moderate/ Heavy and Heavy	17.0	18.4	26.6	38.5	20.9	13.6	5.3	14.8	42.9
		32.00	27.78	39.74	25.58	31.75	51.22	0.00	6.67	46.15
Total		50	54	78	86	63	41	16	45	130

*Fathers: chi square = 17.028 (df=4; p=0.002; C=0.293)

**Mothers: chi square = 15.905 (df=4; p=0.003; C=0.278)

***Friends: chi square = 81.220 (df=4; p=0.0001; C=0.546)

Table Q

Frequencies and Percentages of Others' Attitude by Adolescent Drinklevel

		Others' Attitude								
		Fathers			Mothers*			Friends**		
Drinklevel		Approve	Neutral	Disap	Approve	Neutral	Disap	Approve	Neutral	Disap
Appropriate	Low	6 ^a	4	22	2	3	34	10	12	10
	Abstinence and Infrequent	7.8 ^b	5.6	18.6	5.4	5.0	28.5	17.5	12.0	2.5
		15.79 ^c	14.81	24.44	8.00	13.04	25.95	10.20	17.91	71.43
	Medium	12	10	42	8	9	62	41	41	2
Appropriate	Light and Moderate	15.7	11.1	37.2	11.0	10.2	57.8	46.0	31.4	6.2
		31.58	37.04	46.67	32.00	39.13	47.33	41.84	61.19	14.29
Inapprop.	High	20	13	26	15	11	35	47	14	2
	Moderate/ Heavy	14.5	10.3	34.3	8.5	7.8	44.6	34.5	23.6	4.9
	and Heavy	52.63	48.15	28.89	60.00	47.83	26.72	47.96	20.90	14.27
Total		38	27	90	25	23	131	98	67	14

*Mothers: chi square = 13.587 (df=4; p=0.009; C=0.266)

**Friends: chi square = 42.482 (df=4; p=0.0001; C=0.438)

Table R

Frequencies and Percentages of Fathers' Attitude by Fathers' Drinking and Adolescent Drinklevel

		Fathers' Attitude								
		Approval			Neutral			Disapproval*		
		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Drinklevel		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Appropriate	Low	0 ^a	3	1	1	2	1	15	5	1
	Abstinance and Infrequent	0.6 ^b	1.0	2.4	0.6	1.2	2.2	8.7	6.5	5.8
		0.00 ^c	37.50	5.26	25.00	25.00	6.67	41.67	18.52	4.17
Appropriate	Medium	2	2	6	1	3	6	10	14	16
	Light and Moderate	1.6	2.5	5.9	1.5	3.0	5.6	16.6	12.4	11.0
		40.00	25.00	31.58	25.00	37.50	40.00	27.78	51.85	66.67
Inapprop.	High	3	3	12	2	3	8	11	8	7
	Moderate/ Heavy and Heavy	2.8	4.5	10.7	1.9	3.9	7.2	10.8	8.1	7.2
		60.00	37.50	63.16	50.00	37.50	53.33	30.56	29.63	29.17
Total		5	8	19	4	8	15	36	27	24

*Disapproval: chi square = 13.942 (df=4; p=0.008; C=0.372)

Table S

Frequencies and Percentages of Mothers' Attitude by Mothers' Drinking and Adolescent Drinklevel

		Mothers' Attitude								
		Approval			Neutral			Disapproval		
Drinklevel		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Appropriate	Low	1 ^a	1	0	0	3	0	35	6	2
	Abstinence and Infrequent	0.3 ^b	0.9	0.8	0.5	1.4	1.0	20.0	8.7	4.3
		33.33 ^c	9.09	0.00	0.00	27.27	0.00	32.05	17.65	11.76
	Medium	1	5	2	1	5	3	35	18	8
Inapprop.	Light and Moderate	1.0	3.7	3.3	1.6	4.3	3.1	36.9	16.1	8.0
		33.33	45.45	20.00	25.00	45.45	37.50	44.87	52.94	47.06
Inapprop.	High	1	5	8	3	3	5	18	10	7
	Moderate/ Heavy and Heavy	1.8	6.4	5.8	1.9	5.3	3.8	21.2	9.2	4.6
		33.33	45.45	80.00	75.00	27.27	62.50	23.08	29.41	41.18
Total		3	11	10	4	11	8	78	34	17

No significant relationships

Table T

Frequencies and Percentages of Fathers' Attitude by Friends' Drinking and Adolescent Drinklevel

		Fathers' Attitude								
		Approval*			Neutral			Disapproval**		
Drinklevel		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Appropriate	Low	2 ^a	2	2		2	2	9	9	4
	Abstinence and Infrequent	0.3 ^b	0.5	5.2		0.7	3.3	2.5	5.2	14.3
		100.00 ^c	66.67	6.25		40.00	9.09	90.00	42.86	6.90
Appropriate	Medium	0	1	11		2	8	1	10	30
	Light and Moderate	0.6	1.0	10.4		1.9	8.1	4.6	9.7	26.7
		0.00	33.33	34.38		40.00	36.36	10.00	47.62	51.72
Inapprop.	High	0	0	19		1	12	0	2	24
	Moderate/ Heavy and Heavy	1.0	1.5	16.4		2.4	10.6	2.9	6.1	16.9
		0.00	0.00	59.38		20.00	54.55	0.00	9.52	41.38
Total		2	3	32		5	22	10	21	58

*Approval: chi square = 18.982 (df=4; p=0.0001; C=0.582)

**Disapproval: chi square = 39.372 (df=4; p=0.000; C=0.554)

Table U

Frequencies and Percentages of Mothers' Attitude by Friends' Drinking and Adolescent Drinklevel

		Mothers' Attitude								
		Approval*			Neutral			Disapproval**		
Drinklevel		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Appropriate	Low	1 ^a	1	0	1	1	1	12	15	7
	Abstinence and Infrequent	0.1 ^b	0.1	0.8	0.1	0.7	2.2	3.7	9.4	20.9
		100.00 ^c	100.00	0.00	100.00	20.00	5.88	85.71	41.67	8.75
	Medium	0	0	8	0	3	6	2	19	40
Inapprop.	Light and Moderate	0.3	0.3	7.3	0.4	2.0	6.7	6.6	16.9	37.5
	Heavy and Heavy	0.00	0.00	36.36	0.00	60.00	35.29	14.29	52.78	50.00
	High	0	0	14	0	1	10	0	2	33
	Moderate/Heavy	0.6	0.6	12.8	0.5	2.4	8.1	3.8	9.7	21.5
		0.00	0.00	63.64	0.00	20.00	58.82	0.00	5.56	1.25
Total		1	1	22	1	5	17	14	36	80

*Approval: chi square = 24.00 (df=4; p=0.0001; C=0.707)

**Disapproval: chi square = 51.143 (df=4; p=0.0001; C=0.531)

Table V

Frequencies and Percentages of Father Power by Fathers' Attitude and Adolescent Drinklevel

		Father Power								
		Low			Medium			High		
Drinklevel		Approve	Neutral	Disapp	Approve	Neutral	Disapp	Approve	Neutral	Disapp
Appropriate	Low	3 ^a	3	6	1	0	6	2	1	10
	Abstinence and Infrequent	2.9 ^b	2.7	6.3	1.5	1.6	3.9	3.4	1.1	8.4
		23.08 ^c	25.00	21.43	11.11	0.00	25.00	13.33	20.00	27.03
Appropriate	Medium	3	2	14	4	6	7	5	2	20
	Light and Moderate	4.7	4.3	10.0	3.6	4.0	9.5	7.1	2.4	17.5
		23.08	16.67	50.00	44.44	60.00	29.17	33.33	40.00	54.05
Inapprop.	High	7	7	8	4	4	11	8	2	7
	Moderate/ Heavy and Heavy	5.4	5.0	11.6	4.0	4.4	10.6	4.5	1.5	11.0
		53.85	58.33	28.57	44.44	40.00	45.83	53.33	40.00	18.92
Total		13	12	28	9	10	24	15	5	37

No significant relationships

Table W

Frequencies and Percentages of Mother Power by Mothers' Attitude and Adolescent Drinklevel

		Mother Power								
		Low			Medium*			High		
Drinklevel		Approve	Neutral	Disapp	Approve	Neutral	Disapp	Approve	Neutral	Disapp
Appropriate	Low	1 ^a	0	7	1	2	15	0	1	12
	Abstinance and Infrequent	0.9 ^b	1.1	6.0	3.2	2.7	12.1	1.2	1.2	10.6
		14.29 ^c	0.00	15.56	7.69	18.18	30.61	0.00	25.00	33.33
	Medium	1	3	19	4	4	23	3	2	19
Appropriate	Light and Moderate	2.7	3.1	17.3	5.5	4.7	20.8	2.2	2.2	19.6
		14.29	37.50	42.22	30.77	36.36	46.94	75.00	50.00	52.78
Inapprop.	High	5	5	19	8	.4	11	1	1	5
	Moderate/ Heavy and Heavy	3.4	3.9	21.8	4.3	3.6	16.1	0.6	0.6	5.7
		71.43	62.50	42.22	61.54	45.45	22.45	25.00	25.00	13.89
Total		7	8	45	13	11	49	4	4	36

*Medium Power: chi square = 8.554 (df=4; p=0.073; C=0.324)

Table X

Frequencies and Percentages of Father Power by Friends' Drinking and Adolescent Drinklevel

		Father Power								
		Low*			Medium **			High***		
		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Drinklevel	Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High	
Appropriate	Low	3 ^a	10	3	8	1	1	3	6	4
	Abstinence and Infrequent	0.9 ^b	0.5	10.6	1.5	1.5	7.1	0.8	3.5	8.7
		75.00 ^c	52.63	6.67	100.00	12.50	2.56	75.00	33.33	9.09
Appropriate	Medium	1	8	18	0	7	19	1	10	24
	Light and Moderate	1.6	7.5	17.9	3.8	3.8	18.4	2.1	9.5	23.3
		25.00	42.11	40.00	0.00	87.50	48.72	25.00	55.56	54.55
Inappropri.	High	0	1	24	0	0	19	0	2	16
	Moderate/ Heavy and Heavy	1.0	7.0	16.5	2.8	2.8	13.5	1.1	4.9	12.0
		0.00	5.26	53.33	0.00	0.00	48.72	0.00	11.11	36.36
Total		4	19	45	8	8	39	4	18	44

*Low: chi square = 26.986 (df=4; p=0.0001; C=0.533)

**Medium: chi square = 49.161 (df=4; p=0.0001; C=0.687)

***High: chi square = 15.205 (df=4; p=0.004; C=0.433)

Table Y

Frequencies and Percentages of Mother Power by Friends' Drinking and Adolescent Drinklevel

Drinklevel		Mother Power								
		Low*			Medium **			High***		
		Abst.	Moderate	High	Abst.	Moderate	High	Abst.	Moderate	High
Appropriate	Low	2 ^a	4	2	8	7	3	4	6	3
	Abstinence and Infrequent	0.2 ^b	1.5	6.3	2.1	4.4	11.5	1.4	3.9	7.7
		100.00 ^c	33.33	3.92	88.89	36.84	6.12	80.00	42.86	10.71
Appropriate	Medium	0	8	20	1	11	22	1	6	19
	Light and Moderate	0.9	5.2	22.0	4.0	8.4	21.6	2.8	7.7	15.5
		0.00	66.67	39.22	11.11	57.89	44.90	20.00	42.86	67.86
Inappropri.	High	0	0	29	0	1	24	0	2	6
	Moderate/ Heavy and Heavy	0.9	5.4	22.8	2.9	6.2	15.9	0.9	2.4	4.8
		0.00	0.00	56.86	0.00	5.26	48.98	0.00	14.29	21.43
Total		2	12	51	9	19	49	5	14	28

*Low: chi square = 30.270 (df=4; p=0.0001; C=0.564)

**Medium: chi square=38.649 (df=4; p=0.0001; C=0.578)

***High: chi square = 12.576 (df=4; p=0.014; C=0.459)

APPENDIX G
CORRELATION TABLE

Correlation Coefficients

	AGE	SEX	SIBLINGS	FATHERS ' AGE	MOTHERS ' AGE	FATHERS ' EDUC.	MOTHERS ' EDUC.
AGE	.000 1.00						
SEX	.000 1.00	1.00 .000					
SIBLINGS	.000 1.00	.061 .412	1.00 .000				
FATHERS ' AGE	.000 1.00	.019 .802	.275 .000	1.00 .000			
MOTHERS ' AGE	.000 1.00	.047 .522	.215 .003	.823 .000	1.00 .000		
FATHERS ' EDUC.	.000 1.00	-.029 .687	.014 .852	-.059 .427	-.034 .641	1.00 .000	
MOTHERS ' EDUC.	.000 1.00	-.007 .915	-.109 .133	-.101 .176	-.127 .083	.392 .000	1.00 .000
FATHERS ' SUPPORT	.000 1.00	.047 .519	-.051 .483	-.040 .593	.067 .360	.244 .001	.004 .960
MOTHERS ' SUPPORT	.000 1.00	.184 .011	-.068 .348	-.157 .035	-.129 .077	.165 .023	.198 .006
FATHERS ' INDUCTION	.000 1.00	-.191 .008	.178 .014	.047 .531	-.033 .649	-.052 .473	-.042 .561
MOTHERS ' INDUCTION	.000 1.00	-.090 .217	.135 .063	.052 .486	.044 .552	-.154 .034	-.082 .263

	AGE	SEX	SIBLINGS	FATHERS ' AGE	MOTHERS ' AGE	FATHERS ' EDUC.	MOTHERS ' EDUC.
FATHERS ' COERCION	.000 1.00	-.186 .009	.041 .576	-.020 .784	-.100 .170	-.198 .006	-.083 .254
MOTHERS ' COERCION	.000 1.00	-.198 .006	-.012 .873	.077 .305	.030 .682	-.095 .192	-.142 .050
FATHERS ' POWER	.000 1.00	-.042 .565	.036 .623	.084 .264	.135 .064	.265 .000	.009 .902
MOTHERS ' POWER	.000 1.00	.287 .000	.128 .078	-.129 .083	-.077 .292	-.084 .249	.125 .086
FATHERS ' DRINK	.000 1.00	.119 .109	-.032 .665	-.096 .204	-.035 .644	.011 .884	.039 .605
MOTHERS ' DRINK	.000 1.00	.063 .391	-.122 .092	-.144 .054	-.119 .106	.247 .001	.165 .023
FATHERS ' APPROVE	.000 1.00	.002 .982	.013 .855	.172 .021	.094 .199	-.116 .109	.005 .950
MOTHERS ' APPROVE	.000 1.00	-.055 .450	-.071 .331	.124 .096	.080 .276	-.116 .111	-.007 .929
FRIENDS ' DRINK	.000 1.00	-.126 .082	-.084 .250	-.117 .118	-.068 .355	.137 .060	.147 .043
FRIENDS ' APPROVE	.000 1.00	.201 .005	-.010 .888	.064 .393	.076 .302	-.123 .090	-.072 .322
ADOLESCENT DRINK	.000 1.00	-.266 .000	-.053 .469	-.037 .620	.035 .638	.142 .050	.070 .341

	FATHERS ' SUPPORT	MOTHERS ' SUPPORT	FATHERS ' INDUCTION	MOTHERS ' INDUCTION	FATHERS ' COERCION	MOTHERS ' COERCION	FATHERS ' POWER
FATHERS ' SUPPORT	1.00 .000						
MOTHERS ' SUPPORT	.468 .000	1.00 .000					
FATHERS ' INDUCTION	.188 .009	.113 .120	1.00 .000				
MOTHERS ' INDUCTION	-.039 .592	.159 .028	.602 .000	1.00 .000			
FATHERS ' COERCION	-.344 .000	-.155 .032	.418 .000	.384 .000	1.00 .000		
MOTHERS ' COERCION	-.220 .002	-.282 .000	.225 .002	.375 .000	.552 .000	1.00 .000	
FATHERS ' POWER	.544 .000	.226 .002	.224 .002	.035 .626	-.179 .014	.008 .908	1.00 .000
MOTHERS ' POWER	.055 .450	.370 .000	.024 .739	.056 .444	-.025 .732	-.046 .530	.217 .003
FATHERS ' DRINK	-.137 .066	.030 .688	-.169 .023	-.131 .078	-.056 .453	-.129 .083	-.134 .072
MOTHERS ' DRINK	.115 .115	.055 .448	-.091 .210	-.175 .016	-.180 .013	-.210 .004	.058 .425
FATHERS ' APPROVE	-.130 .073	-.115 .112	.073 .317	.012 .869	.180 .013	.055 .450	-.050 .496

	FATHERS ' SUPPORT	MOTHERS ' SUPPORT	FATHERS ' INDUCTION	MOTHERS ' INDUCTION	FATHERS ' COERCION	MOTHERS ' COERCION	FATHERS ' POWER
MOTHERS ' APPROVE	-.033 .651	-.114 .116	-.002 .983	-.028 .703	.077 .291	-.047 .521	.043 .558
FRIENDS ' DRINK	.067 .357	.086 .235	.041 .572	-.058 .428	-.035 .632	-.077 .293	-.002 .978
FRIENDS ' APPROVE	-.022 .758	-.016 .827	-.133 .066	-.108 .136	-.031 .673	-.046 .529	-.063 .389
ADOLESCENT DRINK	.040 .579	.012 .866	.086 .235	-.043 .555	-.021 .772	-.078 .281	-.040 .583

	MOTHERS ' POWER	FATHERS ' DRINK	MOTHERS ' DRINK	FATHERS ' APPROVE	MOTHERS ' APPROVE	FRIENDS ' DRINK	FRIENDS ' APPROVE
MOTHERS ' POWER	1.00 .000						
FATHERS ' DRINK	-.030 .691	1.00 .000					
MOTHERS ' DRINK	-.110 .131	.584 .000	1.00 .000				
FATHERS ' APPROVE	.065 .371	-.014 .850	-.103 .159	1.00 .000			
MOTHERS ' APPROVE	.016 .828	-.002 .980	-.104 .154	.559 .000	1.00 .000		
FRIENDS ' DRINK	-.163 .024	.283 .000	.323 .000	-.258 .000	-.083 .256	1.00 .000	
FRIENDS ' APPROVE	.157 .031	-.114 .127	-.180 .013	.168 .020	.093 .120	-.417 .000	1.00 .000
ADOLESCENT DRINK	-.235 .001	.213 .004	.271 .000	-.209 .004	-.157 .030	.588 .000	-.399 .000