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PARENTAL OVERPROTECTION AND AUTONOMY

IN PRE-ADOLESCENTS WITH SPINA BIFIDA

The purpose of this study was: (1) to develop a psychometrically-sound observational measure of parental overprotectiveness, based on Levy's (1966) theory of parental overprotectiveness, (2) to examine whether parents who have a child with spina bifida differ from parents with an able-bodied child on this observational measure (as well as on several self-report questionnaire measures of overprotectiveness), and (3) to examine the predictive utility of overprotectiveness for behavioral and emotional autonomy in these two groups.

Thirty-eight pre-adolescents (8- or 9-years-old) with spina bifida and their parents, as well as a control group of 39 demographically-matched able-bodied pre-adolescents and their parents were interviewed using self-report measures of overprotectiveness and autonomy as well as a series of videotaped family interaction tasks.

Results revealed higher levels of parental overprotectiveness in the spina bifida vs. the able-bodied sample. In addition, children with spina bifida and able-bodied children do not differ on levels of emotional and behavioral autonomy. Children who perceive their parents as highly overprotective have mothers and fathers who report

lower levels of child behavioral autonomy. Similarly, mothers who reported that they were highly overprotective also reported lower levels of child behavioral autonomy.

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LOYOLA UNIVERSITY CHICAGO

PARENTAL OVERPROTECTION AND AUTONOMY
IN PRE-ADOLESCENTS WITH SPINA BIFIDA

A THESIS SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
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BY

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ABSTRACT

Past research based on questionnaire data has identified high levels of parental overprotectiveness in some families with chronically-ill or physically-ill children (Capelli et al. 1989; Mattson 1972; Spock and Stedman 1966; Tropauer, Franz and Dilgard 1970; Leiken and Hassakis 1973). It appears that parents who care for a child with a chronic illness may be divided between the desire to foster independence in the ill child and the need to protect the child from harm or a worsening medical condition (Anderson and Coyne 1993). Thus, although there may be some health-related benefits to such higher levels of overprotectiveness, excessive amounts of parental overprotectiveness may hinder a child's sense of independence and individual autonomy. The purpose of this study was threefold: (1) to develop a psychometrically-sound observational measure of parental overprotectiveness, based on Levy's (1966) theory of parental overprotectiveness, (2) to examine whether parents who have a child with spina bifida differ from parents with an able-bodied child on this observational measure (as well as several child- and parent-report questionnaire measures of overprotectiveness), and (3) to examine the predictive utility of overprotectiveness for

behavioral and emotional autonomy in these two groups.

Participants included 38 pre-adolescents (8- or 9-years-old) with spina bifida and their mothers and fathers, and a control group of 39 demographically-matched able-bodied pre-adolescents and their parents. During a home-based interview, parents and children completed self-report measures of overprotectiveness and autonomy and participated in a series of videotaped family interaction tasks. Four of these tasks were coded for parental overprotectiveness by undergraduate research assistants utilizing a 17-item Likert scale macro-coding scheme developed by the authors. The coding system demonstrated adequate inter-rater reliabilities based on intraclass correlation coefficients.

Results based on questionnaire and observational data revealed higher levels of parental overprotectiveness in the spina bifida vs. the able-bodied sample. Specifically, children and unbiased observers reported that parents of children with spina bifida were more overprotective than parents of able-bodied children. Fathers of able-bodied children were the least overprotective and mothers of children with spina bifida tended to be the most overprotective.

Contrary to expectations, results of this study suggest that children with spina bifida and able-bodied children do not differ on levels of emotional and behavioral autonomy. Nor were there any significant group by overprotectiveness

interaction effects in predicting autonomy; such a lack of interaction effects indicates that the manner in which overprotectiveness is associated with autonomy did not differ across the two groups. However, main effects findings suggested that when parents were divided into high and low overprotectiveness groups, significant differences across these groups were detected for reports of behavioral autonomy. That is, children who perceive their parents as highly overprotective have mothers and fathers who report lower levels of child behavioral autonomy. Similarly, mothers who reported that they were highly overprotective also reported lower levels of child behavioral autonomy. Results will be interpreted in relation to the adolescent development literature as well as the literature on parenting in families with chronically-ill and physically-disabled children.

CHAPTER 1
INTRODUCTION

The importance of a healthy parent-child relationship to adolescent psychosocial development has been well established (Rutter 1972; Bowlby 1969). From a theoretical perspective, parent-child relationships have been thought to be influenced not only by the characteristics of the parent (for example psychological or cultural influences), or by characteristics of the child (such as individual differences in attachment behavior), but also by "characteristics of the reciprocal, dynamic and evolving relationship between the child and the parent" (Parker, Tupling and Brown 1979, 1).

It has been suggested that the concept of autonomy is central to the development of both healthy parental and family relationships. The process of achieving autonomy has been identified as a necessary and important developmental task occurring during early adolescence. In addition to its importance for maintaining healthy parental and family relationships, reports of autonomy among adolescents have been linked to a host of positive outcomes, such as better adjustment to separation, increased levels of assertive behavior, dating competence, resistance to peer pressure,

higher levels of self-esteem, and adult models of attachment (Allen et al. 1994; Ryan and Lynch 1989; Ricks 1985). In addition, it has been reported that increases in levels of ego development and self-esteem were reported among adolescents whose fathers' behavior was interpreted as encouraging adolescents' autonomy and relatedness (Allen et al. 1994).

The purpose of this study is to examine the impact of parental overprotection on the achievement of autonomy among adolescents with spina bifida. It appears that in many families caring for a child with chronic illness, there is a large amount of ambiguity and conflict between desires to foster independence in the ill child and to protect the child from harm (Anderson and Coyne 1993). Overprotectiveness may hinder a child's sense of independence and individual autonomy. Therefore, the relationship between parental overprotectiveness and autonomy may be particularly dramatic in this group.

In the sections that follow, the literature on the development of autonomy during adolescence will be reviewed. Parental overprotectiveness, as a factor inhibiting the development of autonomy among chronically ill individuals will then be defined and discussed. Furthermore, it will be argued that the study of psychosocial adjustment in overprotected adolescents with chronic illness is important

because overprotection is more prevalent in families caring for children with chronic illness than among families with typically-developing adolescents and because parental overprotection may be associated with psychosocial adjustment difficulties in chronically ill children.

CHAPTER 2

REVIEW OF THE LITERATURE

Parental and Family Influences on Adolescent Development

An extensive literature exists pertaining to the characteristics of both parental and family influences on the development of children and adolescents (Rutter 1980). With the identification of these characteristics, researchers have discriminated between those characteristics which are necessary for healthy adolescent development, as well as those which are associated with unhealthy development. It has been suggested that parents play a particularly important role during adolescence, because within the parent-child relationship, an adolescent gains exposure to several influences which have been associated with healthy adolescent development. These influences include developing dependencies, identifying with parental figures, developing self-confidence, self-regulation, and individuality, and experiencing separation and loss (Hauser et al. 1984).

Research suggests that the most optimal relationship in which a child can mature is one characterized by "warmth," "psychological autonomy," and "demandingness" (Steinberg

1990). Taken together, this blending of characteristics defines an authoritative style of parenting. In contrast to authoritarian, indulgent, or indifferent styles of parenting, adolescents who mature within the context of an authoritative style of parenting develop best in terms of psychosocial and psychological development. Within this parent-child relationship, an adolescent is allowed to express his or her own ideas and is respected as an individual within the context of a warm, receptive relationship. While being receptive and responsive to the child's needs, the parent also places demands on the child in order to regulate and monitor his or her behavior. For example, an authoritative parent expects the child to behave in a mature fashion, and sets limits and expectations of the child through the enforcement of rules and reasonable discipline (Baumrind 1967; Macoby and Martin 1983; Steinberg 1990).

In addition to identifying characteristics of the parent-child relationship which are influential in healthy adolescent development, researchers have also identified characteristics within the family system which are believed to be effectual in this process. It appears that parental vs. family relationships differ in terms of the influences they have on an adolescent. For example, while discussions of parent-child relationships generally refer to hierarchical, dyadic alliances (i.e., mother-child, father-child, mother-father, etc.), family relationships consider connections

between several members of the family, including parents, siblings and extended family members. In this way, the family is considered as a multifaceted system, and is likely to exert multiple influences. Within this context, a family is said to evolve and adapt according to the changing characteristics of one of its members (Collins 1990).

In terms of characteristics indicative of successful family relationships, several have been identified within the literature. Among these, individuation and differentiation seem particularly relevant to this discussion of adolescent development. Together, they represent ways in which the family can create an environment which will allow for an adolescents' successful transition into adulthood (Gavazzi, Anderson and Sabatelli 1990; Olsen, Sprenckle and Russell 1979).

Individuation and differentiation are conjoint processes which exist within the family system. Individuation refers to the process in which the parent-child relationship is transformed from one characterized by unilateral parental authority to one which fosters independence and responsibility. The child becomes less dependent on the parent, and this dependency is replaced by mutual interactions, in which the parent and child regard each other more like peers (O'Brien 1989; Gavazzi and Sabatelli, 1990). Differentiation is a term used to describe the patterns of family interaction which allow for a balance of age-

appropriate individuality and intimacy. In addition, differentiation has been described as the process by which individuation occurs (Gavazzi, Anderson and Sabatelli 1993; Gavazzi and Sabatelli 1990). Families which promote differentiation allow for a balance of age-appropriate intimacy and individuality (Gavazzi and Sabatelli 1990).

Whereas the well-differentiated family supports the development of individuality while at the same time promoting a degree of belongingness, the poorly differentiated family regulates distances in extreme ways. For example, members in a poorly differentiated family are often faced with having to preserve individuality at the expense of belongingness, or belongingness at the expense of individuality. Such extreme situations can prevent an adolescent from experiencing normal, healthy development (Gavazzi, Anderson and Sabatelli 1993).

Autonomy as a Multidimensional Construct

The conceptualization of autonomy has been a main concern of researchers and theorists interested in psychosocial development in adolescence. Autonomy has been defined from several different theoretical perspectives, including psychoanalytic theory, social learning and behavioral theories, and social-cognitive theory (Hill and Holmbeck 1986; Steinberg 1990; Steinberg and Silverberg 1986), leading to several conceptualizations of the construct within the literature.

Anna Freud (1958, 1969) was perhaps the first to operationally define autonomy within adolescent development in terms of a process of detachment from a close relationship with parents. Others followed with conceptualizations of autonomy as involving independence, individuation, resistance to peer or parental pressure, independence related to parental control, and self-governance (Steinberg and Silverberg 1986). Still others have conceptualized autonomy as participation and confidence in decision-making. As a result of these multiple conceptualizations, research has yielded multiple uses of the word autonomy, resulting in what some have called an atheoretical and undefined concept (Hill and Holmbeck 1986; Steinberg and Silverberg 1986). Thus, it appears that the concept of autonomy is not unidimensional.

In the present study, two specific forms of autonomy were of interest. Emotional autonomy refers to both a "casting off of infantile ties to parents," as well as a distancing of the adolescent from the parents. An extremely high degree of emotional autonomy is not associated with the concepts of autonomy and independence because the latter concepts are suggestive of positive developmental processes. At this level, emotional autonomy can be described as emotional detachment, because it is associated with adolescent views of parents as rejecting and unsupportive (e.g., the construct correlates negatively with parent-child closeness and family cohesion) (Ryan and Lynch 1989).

In contrast, a relationship in which the level of emotional autonomy is low is one characterized by attachment, rather than detachment. Adolescents in such a relationship report that their parents are emotionally accepting, encouraging, and supportive of their independence and autonomy. As such, lower emotional autonomy is associated with more positive outcomes (Ryan and Lynch 1989; Steinberg and Silverberg 1986).

A second form of autonomy, behavioral autonomy, has been reported to be beneficial to adolescent development, and related to positive outcomes. A key task associated with this development is the movement towards self-reliance, in which independent decision-making becomes more prevalent. It appears that as parent-child relationships change over the course of adolescence, there are concomitant changes in family decision-making. It has been reported that families that increasingly grant more behavioral autonomy to an adolescent promote more adaptive outcomes for their adolescent (Holmbeck 1992; Holmbeck and O'Donnell 1991).

The Process of Achieving Autonomy

During Adolescence

The development of an autonomous relationship with parents begins during early adolescence. During this time, adolescents and parents mutually negotiate the process of the adolescents' exploration from a secure attachment base (Allen et al. 1994). It is likely that the developmental changes of

adolescence will alter parental expectations (Collins 1990). For example, many parents reward their adolescent with greater freedom or increased responsibility, while others manage the transition with increased restrictiveness (Hill and Holmbeck 1986).

Although past conceptualizations of autonomy described adolescence as a highly conflicted period in terms of parent-child relationships, more recent research has refuted this notion. Hill and Holmbeck (1986) describe the process of autonomy development as one through which an adolescent achieves independence, while maintaining a positive relationship with parents. This has been termed a state of "autonomous-relatedness (Allen et al. 1994; Hill and Holmbeck 1986). According to Hill and Holmbeck (1986), past concepts of autonomy which focus only on independence from parental influence are lacking, because they do not provide information about what is retained in the parent-child relationship once autonomy is achieved. Instead, autonomy is useful as a concept when it is:

Not defined negatively in terms of freedom from parental attachments and influence and begins to be defined positively in terms of processes of and individual differences in self-governance or self-regulation....(and when the definition) focuses simultaneously upon transformations in attachment and changes in self-regulating processes both within and outside the family context (Hill and Holmbeck 1986, 181).

Moreover, several studies have suggested that extreme levels of conflict are not typical in normal families

(Alexander 1973; Steinberg and Hill 1978; Steinberg 1981). Instead, perturbations in family relations associated with adolescent strivings for autonomy are temporary, and primarily involve minor issues. Although healthy families allow disagreements and interruptions, they foster compromise and supportiveness in their efforts to come to a resolution. In contrast, unhealthy families do not appropriately manage the adolescents' transition into a more autonomous relationship, but instead develop hostility when the old patterns do not continue. When autonomy is not permitted in the relationship, it may be due to the parents' inability to respond to the physical and psychological changes occurring in their adolescent (Hill and Holmbeck 1986; Hill 1980; Hill and Steinberg 1976).

Overprotection as a Factor Inhibiting the Development of Autonomy

Some studies have suggested that differences between families in terms of demographics and individual differences can influence the way family relations are formed, thus impacting the achievement of autonomy. In addition, changes in family relationships which serve to either promote or prevent autonomy may be influenced by the psychological development of the parents as well as the adolescent (Steinberg 1990). It appears, then that characteristics which inhibit the development of autonomy would be detrimental to

the development of healthy parent-child and family relationships.

One such inhibiting characteristic that has received relatively little attention throughout the literature is parental overprotection. The theory of overprotection was first introduced by Levy (1943) in a published report of several selected case studies of mothers who overprotect and their children. The theory describes four behaviors which are characteristic of parental overprotection: excessive contact with the child, infantilization, prevention of independent behavior, and lack or excess of parental control. According to Levy, excessive contact is the behavior most indicative of overprotection. When contact is excessive, a child's independent growth is not fostered. Infantilization, another behavior characteristic of overprotection, concerns the persistence of a parent to engage in activities or to care for the child beyond the time when these activities normally occur. Situations which would be considered suggestive of infantilization concern daily activities such as feeding, dressing, and punishing a child. A third behavior related to overprotection, prevention of independent behavior, can be said to occur when a parent prevents a child from being self-reliant, or independent. According to Levy (1966),

In general, the maternal activity is a continuation of behavior towards the infant, which reinforces closeness and infantilization, with the added gesture of pulling the child back, and of preventing his/her growth into more independent behavior. Further maternal

activity preventing the child from developing responsibility and fighting his own battles consists in constantly taking up his defense, in guarding them from social contacts outside the home, in trying to overcome on his behalf any possible hardship (71).

A fourth behavior associated with overprotection, maternal control, can manifest itself in two opposing behaviors. Overindulgence, for example, consists of a parent incessantly yielding to the child's wishes, or giving in to excessive demands made by the child. In more familiar terms this might be called "spoiling" a child. In contrast, a parent who dominates a child may also exhibit behaviors which are excessively controlling. A parent engaged in this type of behavior attempts to mold the child according to his or her wishes, and usually accomplishes this by preventing any expression the child may elicit that does not meet these wishes (Levy 1966).

More recently, Parker (1983) examined the parental contribution to bonding, and expanding on Levy's (1966) theory of overprotection, concluded that bonding may be influenced by parental overprotection. According to Parker (1983), overprotectiveness is related to psychological control over the child. Similar to Levy's theoretical description, a parent that overprotects is likely to be intrusive, direct and control the child through guilt, and use covert psychological methods of controlling a child. Such control prevents the child from developing as an individual. In general, Parker reported that an uncaring style of

overprotectiveness coupled with a high degree of control is particularly detrimental to a child's development. This parenting style has been referred to as "affectionless control" (Parker 1983).

Factors Influencing the Development of Parental Overprotectiveness

In his theory of maternal overprotection, Levy (1966) describes several characteristics which are likely to influence a mother towards overprotection. These include problems in the sexual relationship between the child's parents, diminished social life, a search for an emotionally supportive relationship, or an excessive feeling of responsibility towards the care of children. A factor that has perhaps received the most attention from both Levy and others (Anderson and Coyne 1993; Bowen 1989; Coyne, Wortman and Lehman 1988; Elman 1991; MacFarlane 1987) concerns the likely presence of overprotection in families caring for children who are severely ill due to accidental reasons, or a congenital birth defect. According to Levy (1966), in these situations, the most extreme cases of overprotection can be observed. Mothers tend to favor the ill child, because they are likely to be more dependent on the parent than other children. Illness per se does not produce the overprotection. Rather, frequent care which is required under these circumstances results in greater amounts of maternal contact which may lead to infantilization of the child. In addition,

prolonged illnesses, as opposed to those that are acute, are reinforcing factors in excessive contact. Levy explains that if an illness is present at birth, maternal contact will be more intense and productive of overprotection than if illness is intermittent during childhood. Furthermore, when overprotectiveness happens during the first year, a parent is less likely to allow the child to grow independently because the pattern has been established at an extremely early age (Levy 1966).

Several more recent studies have supported Levy's (1966) belief that parents are more likely to overprotect an ill child. Several studies have suggested that the additional demands placed on parents who are forced to raise a child with special needs can create exceptional strains on these parents (Floyd and Zmich 1991; Cummings, Bayley and Rie 1966; Friedrich and Friedrich 1981). Caring for a child with a chronic illness can have deleterious effects not only on the parents, but on the child and the parent-child relationship as well (Barakat and Linney 1992).

Other studies have suggested more specifically that childhood illness may elicit overprotection in parents who are prone to anxiety or are particularly responsive to problems caused by illness in the child (Parker 1983). Research suggests that when a child's illness is serious, or the threat of death exists, overprotectiveness is likely to occur. In such situations, overprotectiveness can be

described as a response to the child's emotional and behavioral reaction to the illness, as well as a reflection of parental anxiety (McFarlane 1987). In contrast, when a child has a chronic, mild illness, the parent's anxiety is a secondary response which serves to intensify the attachment between the parent and child (Levy 1966; Parker 1983). According to Levy (1966), in these situations a parent is likely to manifest increased compassion for the child's tribulations, resulting in an intensification of parental care.

In support of this notion, research has identified overprotectiveness in families with a wide range of childhood illnesses (Sabbath 1984), and has been reported even in samples containing mild cases of chronic illness (Capelli et al. 1989). For example, in one study of families with children with cystic fibrosis (both mild and severe levels of illness were included in the sample), a significant relationship was reported between amount of care giving tasks performed by the mother and overprotection. In addition, although maternal care was not associated with child's physical functioning, researchers reported a significant relationship between good physical functioning and increased maternal overprotection. This finding suggests that mothers may be overprotective of children even when the disease severity is mild (Capelli et al. 1989).

According to Bowen (1989), the family with a chronically ill child faces unique problems, because illness can often elicit feelings of uncertainty, sorrow, stigma, and above all, a burden of care that is more pronounced in comparison to healthy families. Moreover, parents of children with medical conditions perceive their children as more vulnerable (Thomasgard et al. 1995b). As a result of these feelings, parents may tend to be overprotective and overindulgent. Feelings of guilt and denial in parents of ill children may lead a parent to strive for control of the situation (Taylor 1983; Eden-Piercy, Blacher and Eyman 1986). In addition, the perception of a loss of control over their child's medical condition can be particularly powerful in families caring for a child with spina bifida, due to the uncertainty of the disorder and complications which can occur as a result of its' unpredictable nature.

Several researchers have explained overprotection in the context of families caring for children who are chronically ill (MacFarlane 1987; Parker 1983; Bowen 1989; Coyne, Wortman and Lehman 1988; Capelli et al. 1989; Elman 1991; Anderson and Coyne 1993). Coyne, Wortman and Lehman (1988) describe the relationship from an interactional perspective in which efforts to be helpful can become "miscarried." Miscarried helping in a parent-child relationship is a process by which a parent's efforts to be helpful to the child paradoxically

lead to unsupportive relationships which become detrimental to the child. As Anderson & Coyne (1993) describe:

The specific issues, coping tasks, and appropriateness of various forms of involvement by family members vary across these chronic illnesses, but there is a basis for postulating a general underlying process, whereby efforts to be helpful to persons who are ill or under stress can become miscarried, particularly in close relationships....a support provider's investment in being helpful and achieving a positive outcome may ironically lead to behavioral transactions that are detrimental to the patient's well-being and successful adaptation to treatment (80).

"Miscarried helping" is likely to occur in close relationships, especially between family members. A parent's emotional investment in the relationship in terms of wanting to be helpful and create a positive outcome for the child have been identified as components to the process of miscarried helping (Anderson and Coyne, 1993). In addition, Coyne, Wortman and Lehman (1988) suggest that over involvement is likely to occur in situations where a caregiver is attempting to be helpful to a person who is under stress, often occurring in cases of illness. In their description of miscarried helping among spouses of myocardial infarction, the process of over involvement is more likely to occur when there is some ambiguity about the reasons for setbacks, or a lack of progress in the ill spouse. In these situations, the caretaker may believe that progress was prevented due to the ill persons' lack of motivation. As a result, the caretaker becomes overprotective in an attempt to increase motivation, and subsequent recovery. These authors

also suggest that feelings of guilt regarding the onset or duration of an illness may lead to aggressive caretaking. In this situation, overprotection can take on a punitive quality, where the caretaker becomes overly critical or punishing towards the ill person. This form of over involvement has been interpreted as an indirect representation of the caretaker's suppressed anger (Coyne, Wortman and Lehman 1988).

A caretakers efforts may lead to interactions in the relationship which are detrimental to the well-being of the ill person. For example, the ill person may become uncomfortable in the role of being helped due to feelings of dependency, guilt or shame, or of feeling little control over whether and when certain things are done for them. Support from a caretaker may threaten an ill persons' self esteem, and may further the persons' feelings of inadequacy and dependency. As a result, the ill person may resent being babied, causing conflict in the relationship. This resentment can subsequently lead the ill person to reject the caretakers efforts in order to maintain self respect, and a sense of control (Coyne, Wortman and Lehman 1988; Anderson and Coyne 1993).

To date, just one study has reported a nonsignificant relationship between parental overprotectiveness and the history of illness or injury in the child (Thomasgard et al. 1995). In this study, parental overprotectiveness was

associated with younger age of the child and parent. However, as the authors noted, the results of this study should be interpreted with caution, because of the relative homogeneity of the sample, and the reliance on self-report measures of overprotectiveness. The authors suggest that use of observational methods may have provided a more complete examination of the presence of overprotectiveness within the parent-child relationship.

Outcomes of Overprotectiveness

Levy's (1966) theory also describes several problems a child is likely to encounter as a result of maternal overprotection. These are, for example, difficulties in social adjustment, school problems, limited friendships, sexual problems, restriction of outside interests, sleep problems, and difficulties with bowel and bladder control. Although these difficulties may not become evident until a child is older, they typically begin to emerge when a child begins to develop a more autonomous relationship with their parents. In general, children who are overprotected are more likely to commit acts of aggression, such as fighting, disobedience, rebellious behavior, and temper tantrums, than to display excessive obedience or submission to parental overprotectiveness (Levy 1966).

Several studies support Levy's (1966) belief that parental overprotectiveness can have deleterious effects on

the developing child. For example, many studies have suggested that overprotectiveness may be a risk factor for adolescent psychopathology (Miller et al. 1992; Tearnan and Telch 1988; Parker, Kiloh and Hayward 1987; Plantes et al. 1988; Whisman and Kwon 1992; Gotlib et al. 1988; Burbach, Kashani and Rosenberg 1989; McFarlane 1987). Several of these studies report a relationship between parental overprotection and depression (Burbach, Kashani and Rosenberg 1989; Gotlib et al. 1988; Whisman and Kwon 1992; Plantes et al. 1988; Parker, Kiloh and Hayward 1987), while others have reported increased levels of parental overprotection in cases of agoraphobia, hypochondriasis, and anxiety disorders (Tearnan and Telch 1988; McFarlane 1987).

Other studies have reported a correlation between psychosocial functioning and parental overprotection. For example, parental overprotection was found to be a stress factor associated with behavioral problems such as thumb sucking, enuresis, sleep disturbances, and temper tantrums among boys in an outpatient setting. In another study, parental overprotection was associated with weight loss behaviors in both males and females. These behaviors included dieting and binge eating in girls, and dissatisfaction with body characteristics in both sexes (Wertheim et al. 1992).

Although the relationship between overprotection and poor adolescent psychosocial adjustment has been documented,

psychosocial adjustment in overprotected chronically ill adolescents has been less rigorously studied. For example, psychosocial maladjustment has been reported in several studies of overprotected children with hemophilia (Mattson 1972; Mattson and Gross 1966a; Mattson and Gross 1966b; Mattson, Gross and Hall 1971). In addition, several studies have suggested behavioral problems in overprotected children with cystic fibrosis (Spock and Stedman 1966; Tropauer, Franz and Dilgard 1970; Leiken and Hassakis 1973). However, the validity of these studies has been criticized due to the use of subjective clinical impressions as a measure of overprotection, as well as lack of a control group and use of small sample sizes (Cappeli et al. 1989). To date, just one study has examined psychosocial adjustment in overprotected physically handicapped adolescents with objective measures of overprotection, use of a control group, and a larger sample size. This study, conducted by Capelli et al. (1989), examined the association between parental overprotection and psychosocial functioning in children with cystic fibrosis. Utilizing Parker's (1979) Parental Bonding Instrument as a measure of overprotectiveness, and the four summary behavioral scales (number of behavioral problems, *t* score on overall behavioral problems, *t* scores on internalizing and externalizing disorders) from the Child Behavior Checklist (CBCL) (Achenbach and Edelbrock 1983), the authors reported

that higher levels of behavioral problems were associated with excessive maternal or paternal overprotectiveness in children with cystic fibrosis. In a group of healthy controls, the opposite finding was reported, such that increased levels of behavioral problems were associated with a lack of maternal care or paternal overprotectiveness. The authors concluded that for healthy children, behavioral problems were the result of a lack of parental control, whereas extreme levels of parental overprotectiveness in chronically ill children resulted in behavioral problems. This study has several limitations, however, including a small sample size ($n = 29$), use of correlation to examine the relationship between overprotectiveness and psychosocial variables, and use of a single retrospective self-report measure of overprotectiveness.

Myelomeningocele (Spina Bifida)

This study will be conducted with young adolescents diagnosed with myelomeningocele (spina bifida). Spina bifida is the most frequently occurring central nervous system disorder among children. It is the most common specific birth defect, with a prevalence rate of approximately one birth per 1,000 in the United States (Varni and Wallander 1988; Lavigne, Nolan and McLone 1988). Spina bifida is a spinal deformity caused by a failure of one or more vertebrae to completely close during the first month of gestation. There are three different forms of the disease, each differing in

terms of severity. Spina Bifida occulta is the least severe, with no specific symptoms or impairment in most cases. Meningocele, the next most severe type of the disease, is typically identified by a noticeable lump containing spinal fluid on the back of the newborn. When the lump contains the spinal cord in addition to spinal fluid, the disease is called myelomeningocele. This most severe form of spina bifida is typically repaired immediately after birth through neurosurgical techniques (Varni and Wallander 1988). The level at which the spinal cord lesion occurs, as well as the extent of cerebral involvement determines the occurrence of and severity of the secondary problems that can accompany a diagnosis of spina bifida. The most common physical effects are muscular paralysis or weakness, impaired ambulation, obesity, neurogenic urinary and fecal incontinence, pressure sores and hydrocephalus (Lavigne, Nolan and McLone 1988). Although it is likely that children with spina bifida will possess several of these secondary physical problems, their IQ's are typically in the Average range. Often, Verbal performance exceeds Performance abilities. In addition, reading (decoding) skills are stronger than arithmetic skills (Wills, Holmbeck and McLone 1990).

Psychosocial Adjustment in Adolescents with Spina Bifida

Several studies have reported that adolescents with spina bifida are at an elevated risk for impaired

psychosocial functioning (Varni and Wallander 1988; Lavigne, Nolan and McLone 1988; Breslau 1985). For example, behavioral adjustment was found to be significantly worse in a group of adolescents with spina bifida when compared to an able-bodied adolescents (Varni and Wallander 1988). In another study, maladjustment rates among those with spina bifida were reported to be two times higher than the general population (Breslau 1985). This finding has been supported in studies using mother, child and teacher self-reports of adjustment as well (Breslau 1985; Varni and Wallander 1988; Laurence and Tew 1971).

In a somewhat older study of more specific aspects of spina bifida children's psychosocial functioning conducted by Dorner (1976), only 24% of adolescents were considered to have been adequately adjusted. Dorner (1976) concluded that adolescents with spina bifida experience greater social isolation, frequent episodes of depression, and preoccupying worries about the future, specifically in terms of career, marriage and children. Although it is not clear to what degree these results generalize to a more contemporary sample of children with spina bifida (as the prognosis is significantly enhanced due to the development and implementation of shunting procedures), other studies have reported similar findings. For example, it has been reported that adolescents with spina bifida possess greater levels of depressed feelings, lower self-esteem, and feelings of social

isolation (Varni and Wallander 1988). For example, McAndrew (1979) reported that between 65-85% of a sample of children with spina bifida reported feeling unhappy as often as once a month, and also reported not having had any social contact with peers for at least one month. In addition, several studies conducted by Wallander, Varni & their colleagues have suggested that family relationships and parental influences bring about impaired psychosocial adjustment (Wallander and Varni 1988).

There are several reasons for studying issues of autonomy in adolescents with spina bifida. First, there have been several reports that adolescents who are physically impaired are especially vulnerable during adolescence (Holmbeck 1992; Wallander et al. 1988). In addition, children with spina bifida enter puberty earlier than typically developing adolescents. Girls enter puberty between 8 and 10 years of age, while boys enter puberty between 9 and 11 years. Early onset of puberty is due to hydrocephalus, which prematurely activates the hypothalamic-pituitary-gonadal axis (Brauner, Fontoura and Rappaport 1991; Greene et al. 1985). As a result, adolescents with spina bifida are more likely to experience conflicted family relationships than others who develop normally (Holmbeck 1992).

This study was directed at examining the following hypotheses. First, levels of parental overprotection in adolescents with spina bifida and able-bodied adolescents

were examined. It was expected that there would be higher levels of parental overprotection reported in the spina bifida vs. the able-bodied sample. Second, a comparison of the levels of overprotection between mothers and fathers in both able-bodied and spina bifida groups was conducted. Although research to date has not examined paternal overprotection, it was expected that mothers would be more likely to be overprotective than fathers, because mothers are likely to comply with the more traditional role as caregiver (Cappeli et al. 1989).

In addition, levels of emotional and behavioral autonomy in overprotected and non-overprotected adolescents in both groups were assessed. For the third hypothesis, it was expected that levels of autonomy would differ for adolescents with spina bifida versus those who are able-bodied, such that able-bodied adolescents would display higher levels of emotional and behavioral autonomy (See figures 1 and 2). Fourth, it was hypothesized that there would be differences in levels of behavioral and emotional autonomy among overprotected vs. non-overprotected adolescents with spina bifida. Specifically, it was expected that overprotected adolescents with spina bifida would possess low levels of behavioral autonomy and high levels of emotional autonomy, whereas non-overprotected children with spina bifida would show the opposite effects, such that scores on behavioral autonomy will be high, and emotional autonomy will be low.

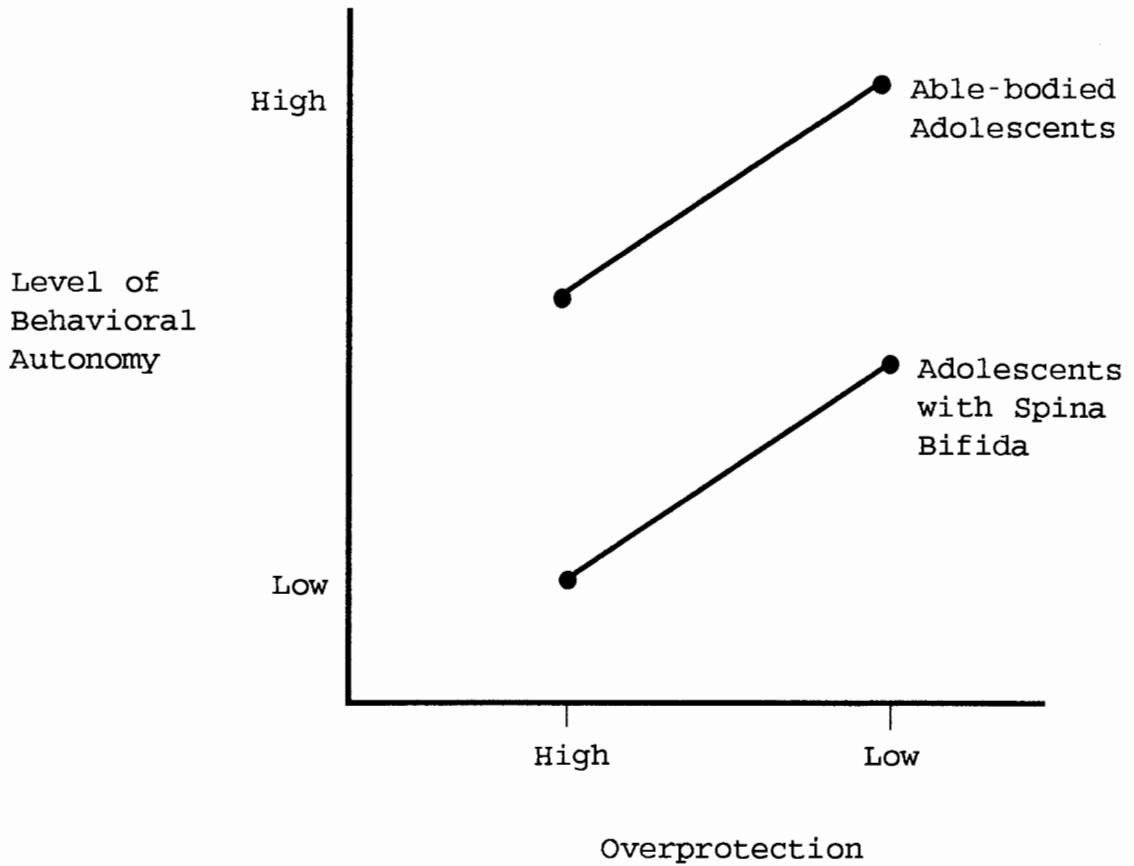


Fig. 1. Predicted levels of behavioral autonomy among high and low overprotected adolescents.

For able-bodied adolescents, it was hypothesized that the levels of behavioral and emotional autonomy among high and low overprotected adolescents would be similar to those with

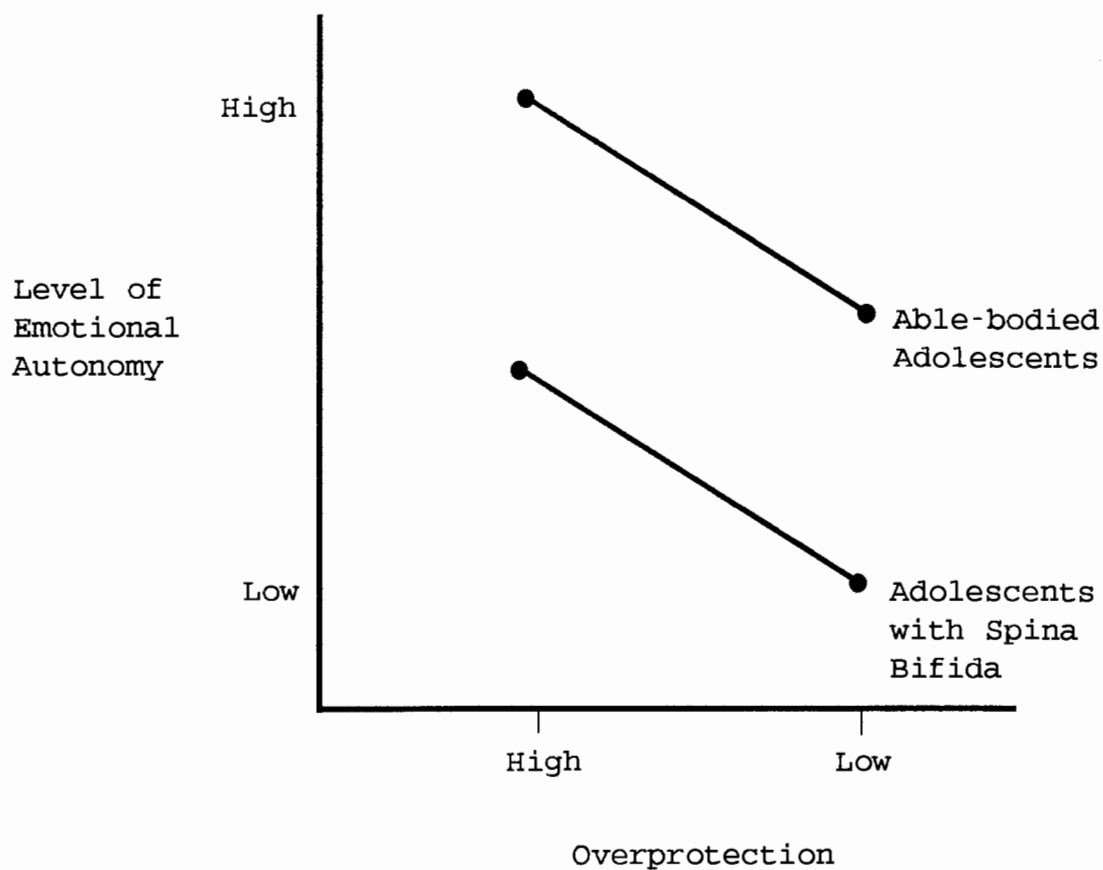


Fig. 2. Predicted level of emotional autonomy among high and low overprotected adolescents.

spina bifida, although it was expected that the overall levels of emotional and behavioral autonomy would be higher than adolescents with spina bifida (See figures 1 and 2).

CHAPTER 3

METHOD

This study was part of a larger study supported by a grant from the March of Dimes. The goal of the study was to examine family relationships and psychosocial adjustment in young adolescents with myelomeningocele (spina bifida). Since data from this grant were utilized in this study, the procedure for the larger grant will be described.

Subjects

An experimental and comparison group were included in this study. The experimental group consisted of a group of 38 adolescents with spina bifida and their parents. The control group was comprised of a group of 39 able-bodied adolescents and their parents. Participants in the spina bifida group were recruited from the following sources: Children's Memorial Hospital, Shriner's Hospital for Crippled Children, and the Illinois Spina Bifida Association. Names and addresses of all 8- and 9-year-olds with spina bifida were forwarded to the author, and parents of these children were then requested to participate by mail. A letter was sent to parents which included a description of the goals of the

study. After the family received the letter, the author contacted the family by telephone to schedule an interview at their home.

Participants in the able-bodied group were recruited from grade schools which the spina bifida children attend. In order to obtain participants, the author contacted the principals of these schools to obtain permission to distribute letters to all children in the third and fourth grades to take home to their parents. The procedure for recruiting participants was similar to that of the spina bifida group in that the parents initially received a letter requesting their participation. Unlike the spina bifida group, the letter sent to the control group included a form which the parent completed indicating their willingness to participate. Those parents willing to participate returned the form to the author in a provided self-addressed, stamped envelope, and the author subsequently contacted the family by telephone to schedule the interview.

Able-bodied subjects were matched to the spina bifida subjects on the following demographic variables: age of child, mother, and father, SES, gender, child ethnicity, birth order, marital status (single parent vs. intact-natural), level of education obtained by parents, family income, and neighborhood residence. Average SES level for each community (city neighborhood or suburb) was provided by

the Illinois and Indiana local state government listings of "average community family income."

All families were residents of either Illinois or Indiana. In addition, all families were paid \$50 for their participation.

Procedure

Data for this project were collected during an approximately 3-hour home-based family interview. Research teams consisted of two research assistants. Teams worked with both able-bodied and spina bifida samples. Research teams were trained in advance of conducting the interviews. Specifically, each team was trained in the following areas: presentation of the goals of the project, familiarity with administering the data protocol, information on interviewing techniques, role plays, informed consent procedures, and strategies for insuring consistency across administrations.

At the scheduled time, research teams arrived at the family's home to conduct the interview. At the beginning of the interview, the parents and child were provided with a brief overview of the project in which the goals of the project, use of the data, and confidentiality were described. Next, the parents and child were asked to sign consent forms and information release forms. Parents signed one form for their participation, and one form for their child's participation. In addition, the child signed a consent form giving permission for their participation.

Upon signing the consent forms, the parents and children were asked to complete a set of questionnaires. Parents completed the questionnaires independently, without consulting their spouses for opinions or confirmation of responses. Parents were told that the research assistant would be available to answer any questions they had during the procedure.

In addition, parents were asked to complete all measures separately from the child (in an adjoining room), in order to assure confidentiality, minimize distractions, and to provide an environment in which the child could respond freely and honestly.

Questionnaires were administered to the child in an interview format by a research assistant. This ensured that all questions were understood and completed by the child. The research assistant read each question aloud to the child. The child then responded by selecting an answer from an enlarged scale which was presented on an easel for each questionnaire. Enlarged scales were created for each measure used with the children. The questionnaire portion of the interview lasted 1 to 1 1/2 hours for both parents and the child. In order to minimize fatigue, parents and child were encouraged to take short breaks as necessary.

After the questionnaires were completed by both parents and child, the family participated in a series of interaction tasks which were audio taped and videotaped. Families were

invited to sit together in a room where the audio tape and videotape equipment had been set up. Prior to introducing each task, families were encouraged to speak loudly and clearly so that the equipment would record their dialogue, and they were also reminded to act naturally and to pretend the camera was not there. Families were then presented with two simple warm-up tasks prior to beginning the interaction tasks. Next, family members completed three interaction tasks: a conflict task (Smetana et al. 1991), an unfamiliar board game, and the structured family interaction task (Ferreira 1963). Each family began by completing the warm up tasks, and the other three activities were counterbalanced among families. This portion of the interview was completed in approximately 1 hour.

Upon completion of all tasks, the family was paid a \$50 reimbursement.

CHAPTER 4

MEASURES

Demographics

Initially, the parents completed a series of questions prior to completing the questionnaires to obtain criteria for matching the able-bodied and spina bifida samples. The following variables were assessed from these questions: gender of child, birth order, ethnicity of family members, ages of family members, SES (including jobs of adults in household, educational attainment, yearly income), developmental milestones, religious affiliation, family structure, neighborhood residence, and prior familial contacts with mental health/medical and special education services.

Measures of Parental Overprotection

The Child Report of Parental Behavior Instrument (CRPBI)

The CRPBI is a 108-item scale that assesses maternal and paternal child-rearing behaviors (Schwartz, Barton-Henry and Pruzinsky 1985; Schludermann and Schludermann 1970). Mothers, fathers, and children completed this measure by rating individual items as "like," "somewhat like," or "not like"

the parent. Mothers and fathers completed self-reports of their own behavior, and children also rated each parent on their behavior. Items were reworded slightly to be appropriate for mothers, fathers, and children. The following subscales were used: hostile control, lax discipline, intrusiveness.

Factor analyses conducted initially by Schludermann & Schludermann (1970) and replicated by Schwartz, Barton-Henry and Pruzinsky (1985) suggests that factors on the CRPBI are generalizable to reports provided by mothers, fathers, and children. Cronbach's alpha revealed moderate internal consistency ($M = .71$) for the 18 individual subscales. In addition, factor analyses reveal generalizability across raters, suggesting that mothers, fathers, and children give similar meanings to the behaviors assessed in this measure (Schwarz, Barton-Henry and Pruzinsky 1985).

Parental Bonding Instrument

This is a measure of parental bonding based on two dimensions: care and overprotection, developed by Parker, Tupling and Brown (1979). Parker et al. (1979) suggests that the scales can be used separately or together as a measure of parental bonding. For the purposes of this study, however, six overprotectiveness items were deemed most relevant, therefore, those items comprising the care dimension will not be used. These items are scored on a 4 point Likert scale.

Test-retest reliability on this measure revealed a correlation of 0.63 on the overprotection subscale with a sample of normal adults. In addition, utilization of a multitrait-multimethod matrix demonstrates the construct and discriminative validity of the PBI (Parker et al. 1979).

Items from the overprotectiveness scale, based on Levy's (1943) theory of parental overprotection, allow for the assessment of high or low levels of overprotection, as well as examination of the influence of parental expectations of psychological and social functioning of children. Items on this scale rate parental overprotection based on the following issues: control, overprotectiveness, intrusion, excessive contact, infantilization and prevention of independent behavior. Mothers, fathers, and child completed this measure.

Family Interaction Tasks

Warm-up tasks

Two warm-up tasks were used. The first was a series of 2,3,4, and five letter anagrams, which the children were asked to work on for five minutes. Parents were encouraged to work with their child as they normally would, helping as much or as little as they wished. The Block Design subtest of the WISC-R was used as the second warm-up task. Blocks were presented to the family along with a series of printed designs which the child was asked to duplicate with the blocks. Families were instructed to complete as many of the

designs as they could during a 5-minute period of time. Parents were again encouraged to work with their child as they normally would until the time was up.

Unfamiliar Board Game Task (UBGT)

During this task, families were asked to play a game which they probably had never seen or heard of. The game itself is unavailable for retail purchase, and must be obtained through an educational catalogue or other professional source. Families spent 10 minutes engaged in this task, during which time they established their own rules and made decisions regarding how to play the game.

Conflict Task (Smetana et al. 1991)

During the questionnaire portion of the interview, parents and child completed the short form of the Issues Checklist (Robin and Foster 1989). Fifteen issues were presented to respondents in this questionnaire (20 for families in the spina bifida group), and respondents were asked to report whether they had discussed the issue at all during the past two weeks by replying either Yes or No. For items that had been discussed, the respondent then rated the level of intensity of each of the discussions on a 5-point Likert scale. Scale items range from "calm" to "angry." Alpha level for child = .70, and for the mother = .82. Robin and Foster (1989) have suggested that this measure can be used to discriminate between distressed and non distressed families.

Prior to the interaction task, conflict frequency scores were then derived for each issue which had been discussed with some level of intensity. Families were then presented with the five most conflicted issues. The interaction task consisted of family members selecting three of the five issues and discussing them for a total of 10 minutes. It was not necessary that the families speak about all three issues, instead, they were encouraged to talk about one or all of them at their discretion, provided that they talked for a total of 10 minutes. Family members were asked to each state what they thought and felt about each issue, and to try to come to some resolution. In addition, families were encouraged to talk about the issues in the same tone of voice as they would normally.

Observational data was coded using a macro-coding method developed by Johnson and Holmbeck (1994) (See Appendix A). This coding system contains four dimensions of overprotectiveness, based on Levy's (1966) theory of maternal overprotection. Individual codes were developed within each of these dimensions, for a total of 11 codes. These dimensions have been defined as infantilization, prevention of independent behavior, excessive contact, and parental control. Parents who overprotect infantilize or baby their children. This behavior has been defined as occurring in situations where a parent "babies" a child, or when a parent is performing activities for the child beyond the usual time

(e.g., feeding, dressing, bathing). As a result of infantilization, children are rarely permitted to do things on their own. Prevention of independent behavior is said to occur in situations in which parents are smothering or attempting to undermine a child's independent functioning, or are preventing a child's growth in the direction of independent behavior. Parental control has been defined as situations in which the parent attempts to dominate the child, in order to maintain power and authority. Last, excessive contact is defined in situations where the parent displays an excessive amount of physical contact with the child. Both mothers and fathers interactions were coded for levels of overprotectiveness. In addition, a set of parallel codes was developed to code the child's conduct in response to the parents' overprotective behaviors. Items were scored on a 5-point Likert scale. The Unfamiliar Board Game Task and the Conflict Task, as well as both warm-up tasks were coded for levels of overprotectiveness.

Coders were blind to the hypotheses. In addition, dummy codes were included within the coding manual to make the hypotheses less apparent.

Measures of Autonomy

Emotional Autonomy Scale

This child-report scale, developed by Steinberg and Silverberg (1986) measures the degree to which children feel emotionally autonomous from their parents. This measure was

completed in reference to the child's mother and father, separately. The measure consists of 14 items which can be divided into 4 subscales. Two of these subscales represent affective aspects of emotional autonomy (non dependence and individuation from parents) and two represent cognitive dimensions of the construct (perceives parents as people, and deidealization). Children responded by indicating their degree of agreement to each item on a 4-point scale ranging from "strongly agree" to "strongly disagree." Approximately one half of the items are worded such that a response of "strongly agree" suggests greater levels of emotional autonomy, while the other half of the measures' items are worded in the opposite direction. Each scale has been reported to have an internal reliability coefficient exceeding .60. The Emotional Autonomy Scale has been used in several studies examining aspects of autonomy and family relationships (Steinberg and Silverberg 1986; Ryan and Lynch 1989).

Decision-Making Questionnaire (DMQ)

This is a self-report measure in which respondents were asked to rate their perception of who makes decisions in the family (Dornbusch et al. 1985). Mothers, fathers, and children completed this measure. Fifteen issues relevant to the able-bodied sample were included in this measure, such as when child has to do homework, and what the child is allowed

to watch on television. Five additional items relevant to those with spina bifida were added for this sample. Items were rated in terms of whether parents have control, the child has control, or whether parents have the final say after obtaining the child's opinion on the issue. Measures of internal consistency, as measured by Cronbach's alpha = .78. Steinberg (1987) reports significant correlations between the DMQ and other measures of parenting, which lends support to the validity of this scale.

Analyses

First, subjects' responses to questionnaires were converted to standardized z scores. Scores for all alike measures on each variable (e.g. overprotectiveness, autonomy) were collapsed into separate composites for mothers, fathers, and children. For some analyses, mothers and fathers were split into high and low overprotective groups utilizing median splits on both questionnaire and observational data.

For the purposes of data analyses, seven variables were created. Utilizing self-report questionnaire data, four variables were created: 1). Mother Overprotectiveness; 2). Father Overprotectiveness; 3). Child Report of Maternal Overprotectiveness; and 4). Child Report of Paternal Overprotectiveness. For these variables, items from the Parental Bonding Instrument and Child Report of Parental Behavior Instrument were combined to form separate variables for mother-, father-, and child-reports (See table 1).

TABLE 1

VARIABLES BASED ON QUESTIONNAIRE AND OBSERVATIONAL DATA

Variables based on Questionnaire Data:

1. Mother Overprotectiveness (MQ):
 - PBI (6 items)
 - CRPBI (18 items)
2. Father Overprotectiveness (FQ):
 - PBI (6 items)
 - CRPBI (18 items)
3. Child Report of Maternal Overprotectiveness (CQ):
 - PBI (6 items)
 - CRPBI (18 items)
4. Child Report of Paternal Overprotectiveness (CQ):
 - PBI (6 items)
 - CRPBI (18 items)

TABLE 1, continued

Variables based on Observational Data:

1. Observed Maternal Overprotectiveness:

Warm-up Task (6 individual codes)

Game Task (5 individual codes)

Conflict Task (5 individual codes)

2. Observed Paternal Overprotectiveness:

Warm-up Task (4 individual codes)

Game Task (5 individual codes)

Conflict Task (5 individual codes)

3. Child Appears Overprotected:

Warm-up Task (5 individual codes)

Game Task (5 individual codes)

Conflict Task (4 individual codes)

NOTE. PBI=Parental Bonding Instrument, CRPBI=Child Report of Parental Behavior Instrument.
CQ=Child Report on Questionnaire, FQ=Father Report on Questionnaire, MQ=Mother Report
on Questionnaire.

Appendix A includes all self-report questionnaire items. In addition, three variables were constructed based on observational data: Observed Maternal Overprotectiveness; 2) Observed Paternal Overprotectiveness; and 3) Child Appears Overprotected. For these variables, observational data was coded based on an overprotectiveness macro-coding system developed for this study. For each variable, warm-up, game and conflict tasks were coded (See table 1). See Appendix B for macro-coding manual and coding sheet.

Two primary analyses were conducted. First, to determine whether mothers and fathers differ on overprotectiveness between groups (e.g. spina bifida vs. able-bodied), a two-way (Group x Parent) repeated measures analysis of variance (ANOVA) was conducted. For this analysis, child report, parent report and observation data constituted the dependent variable. For the first analysis, two hypotheses were tested. With respect to parental overprotectiveness, it was expected that: 1) adolescents with spina bifida would be more overprotected than able-bodied adolescents, 2) mothers would exhibit higher levels of overprotectiveness when compared to fathers.

The second analysis was conducted to determine whether parents with high and low levels of overprotectiveness have children who differ on levels of emotional and behavioral autonomy. For this analysis, a two-way (Groups x Level of Overprotection) multivariate analysis of variance (MANOVA)

was conducted. Child report of emotional autonomy for each parent as well as parent and child report of behavioral autonomy were used. These measures were treated as multivariate dependent variables with Group (able-bodied vs. spina bifida) and level of overprotection (high vs. low) as between subjects factors.

Within the second analysis, two additional hypotheses were examined. It was expected that: 3) levels of autonomy would differ for adolescents with spina bifida vs. those who are able-bodied; and 4) there would be differences in levels of behavioral and emotional autonomy for children whose parents were in the high vs. low overprotectiveness groups. With respect to group differences (spina bifida vs. able-bodied), it was expected that children with spina bifida would have lower levels of behavioral and emotional autonomy when compared to able-bodied children, regardless of levels of overprotectiveness. With respect to parental overprotectiveness, it was expected that adolescents with spina bifida whose parents were in the high overprotectiveness group would display low levels of behavioral autonomy and high levels of emotional autonomy. Conversely, children with spina bifida whose parents displayed low levels of overprotectiveness would show the opposite effects. For these children, level of behavioral autonomy would be high, whereas emotional autonomy would be low (See figures 1 and 2, pages 28 and 29). For able-bodied

adolescents, it was hypothesized that the levels of behavioral and emotional autonomy among high and low overprotected adolescents would be similar to those with spina bifida, although it was expected that the overall levels of emotional and behavioral autonomy would be higher than adolescents with spina bifida (See figures 1 and 2, pages 28 and 29).

CHAPTER 5

RESULTS

Preliminary Analyses

Comparison of Groups on Demographic Matching Variables

The two groups of families (e.g. spina bifida vs. able-bodied) were matched on the following demographic variables: child's age, race, and gender, birth order, level of education obtained by parents, marital status, family income, and age of parents. Demographic characteristics of both groups of families are shown in Table 2.

The data was examined to determine whether there were any differences between the groups with respect to the various family demographic characteristics. To identify any differences, t -tests for continuous variables (e.g., child age) and chi square tests for categorical variables (e.g., gender, race) were conducted. Across a large number of tests, only two differences emerged. Differences were noted on mother's $t(75) = -3.84, p < .000$ and father's $t(56) = -2.05, p < .045$ level of education. Both mothers and fathers in the spina bifida group were slightly less educated than mothers and fathers in the able-bodied group. Thus, in all subsequent analyses, level of education was used as a control variable.

TABLE 2

DEMOGRAPHIC DATA FOR SPINA BIFIDA AND ABLE-BODIED SAMPLES

<u>Demographic</u>	<u>Spina Bifida</u>	<u>Able-Bodied</u>	<u>Statistical Tests</u>
No. of families	38	39	
Child Age <u>M</u> (<u>SD</u>)	8.47 (.50)	8.69 (.56)	t(75) = -1.78
Mother Age <u>M</u> (<u>SD</u>)	37.7 (5.5)	37.8 (4.1)	t(75) = -17
Father Age <u>M</u> (<u>SD</u>)	41.0 (5.6)	39.5 (5.6)	t(56) = 1.05
Child Gender:			
Male (<u>n</u>)	45% (17)	56% (22)	(1) = 1.04
Female (<u>n</u>)	55% (21)	44% (17)	
Child Ethnicity:			
Caucasian (<u>n</u>)	81% (31)	94% (37)	(1) = 3.29
Other (<u>n</u>)	18% (7)	5% (2)	
Child Birth Order			
Mother Report (<u>SD</u>)	2.08 (1.3)	1.92 (1.06)	t(73) = .57
Father Report (<u>SD</u>)	2.27 (1.6)	1.92(1.14)	t(54) = .92
Marital Status:			
% Intact (<u>n</u>)	71% (27)	61% (24)	(1) = .77
% Nonintact	29% (11)	35% (15)	
Education Level:			
Mother	5.4 (1.5)	6.7 (1.5)	t(75) = -3.84**
Father	5.6 (1.7)	6.5 (1.7)	t(56) = -2.05*
Family Income:			
Mother Report	5.00 (2.32)	5.21 (2.00)	t(73) = -.42
Father Report	5.66 (2.00)	5.96 (1.89)	t(56) = -.58

Note: *= $p < .05$. **= $p < .01$. For the marital status chi-square, marital status was collapsed to intact vs. nonintact. Family income is rated on a scale from 1-11 with 1 = less than 10,000, 2 = 10,000-19,000...5 = 40,000-49,000...10 = 90,000-99,000, 11 = over 100,000.

All other analyses resulted in nonsignificant differences, which indicates that the subjects were demographically similar across the two groups.

Correlations Among Overprotectiveness Variables

For the overprotectiveness variables, Pearson correlations were computed to examine the relationship between variables within the questionnaire data, within the observational data, and between the questionnaire and observational data (see Table 3).

In an analysis of the questionnaire data, significant correlations were obtained among the following pairs of variables: child report of father overprotectiveness and child report of mother overprotectiveness, $r = .42$, $p < .01$; child report of father overprotectiveness and mother report of overprotectiveness, $r = .26$, $p < .05$; father report of overprotectiveness and child report of father overprotectiveness, $r = .26$, $p < .05$.

Within the observational data, Pearson correlations yielded significant correlations between: "child appears overprotected" and mother overprotectiveness, $r = .57$, $p < .01$; and father overprotectiveness and mother overprotectiveness, $r = .59$, $p < .01$.

Lastly, correlations between questionnaire and observational data reached significance for the following pairs of variables: observed "child appears overprotected" and mother report of overprotectiveness, $r = .28$, $p < .05$; and

TABLE 3

PEARSON CORRELATIONS BETWEEN QUESTIONNAIRE AND OBSERVATIONAL DATA

	1	2	3	4	5	6	7
1. Mother Overprotectiveness (CQ)	...						
2. Mother Overprotectiveness (MQ)	.21	...					
3. Father Overprotectiveness (CQ)	.42**	.26*	...				
4. Father Overprotectiveness (FQ)	.19	.22	.26*	...			
5. Child Appears Overprotected (O)	.05	.28*	.12	.04	...		
6. Mother Overprotectiveness (O)	-.04	.24*	.16	.00	.57**	...	
7. Father Overprotectiveness (O)	.02	.17	.06	.09	.25	.59**	...

NOTE.-N's vary between 54 and 77, owing to missing values;

CQ=Child Report on Questionnaire, FQ=Father Report on Questionnaire, MQ=Mother Report on Questionnaire, O=Observational data. *=p<.05. **p<.01.

observed mother overprotectiveness and mother report of overprotectiveness, $r = .24$, $p < .05$.

Interrater Reliability

Reliability estimates were computed for both questionnaire (alphas; overprotectiveness, behavioral autonomy, emotional autonomy) and observational variables (intraclass correlations; Shrout & Fleiss, 1979; overprotectiveness).

Observational Reliability

First, interrater reliability was assessed across two raters for all observational overprotectiveness variables. At the item level, intraclass correlations corresponding to the game task ranged from .38 to .88. Those items with correlations less than .40 were dropped from subsequent analyses. In total, two items from the game task were dropped ($M = .63$ after low alpha items were dropped). Intraclass correlations corresponding to the conflict task ranged from .45 to .82 ($M = .69$) at the item level. For the warm-up task, item level intraclass correlations ranged from .10 to .83. Two warm-up task items were dropped from subsequent analyses as a result of intraclass correlations less than .40 ($M = .66$ after low alpha items were dropped). The following codes were dropped for the fathers: 1.) Prevention of exploratory behavior (game task); 2.) Excessive physical contact with child (warm-up task); 3.) Active catering to the child (warm-up task). One code, "Behavior which infantilizes the child"

was dropped for the coding of the mother's behavior on the game task only. It appears that these codes do not have any remarkable similarity to each other, therefore it is uncertain why reliability was not achieved for these codes. Further, given the relatively low number of codes which were dropped, the integrity of the coding system does not appear to have been negatively affected.

Second, overprotectiveness items were combined into several scales for each task. That is, parent (mother and father combined), mother, father, and child items were combined into separate scales for the game, conflict, and warm-up tasks. Interrater reliability correlations at the scale level ranged from .58 to .89 ($M = .76$).

Third, observational scales were then collapsed across task (game, conflict, and warm-up) yielding composite interrater reliability correlations for the following scales: Parental overprotectiveness (mother and father scales combined; $r = .78$), Mother overprotectiveness (intraclass correlation = .81), Father overprotectiveness (intraclass correlation = .84), and "Child appears overprotected" (intraclass correlation = .88).

Questionnaire Reliability

Reliability estimates (alphas) were computed by combining questionnaire items into several composite scales. Items from the child- and parent-report versions of the Child Report of Parental Behavior Instrument (CRPBI) and the Parental Bonding

Instrument (PBI) were combined to create the following scales: child report of mother overprotectiveness ($\alpha = .58$), child report of father overprotectiveness ($\alpha = .68$), father overprotectiveness ($\alpha = .63$), and mother overprotectiveness ($\alpha = .75$). Items from the Decision-Making Questionnaire (DMQ) were combined to form the following scales: child report of behavioral autonomy ($\alpha = .74$), mother report of child's behavioral autonomy ($\alpha = .70$), and father report of child's behavioral autonomy ($\alpha = .82$). Similarly, items from the Emotional Autonomy Scale (EAS) were combined to form two additional scales, child report of emotional autonomy from mother ($\alpha = .62$) and child report of emotional autonomy from father ($\alpha = .60$).

Tests of Hypotheses

Parental Differences in Levels of Overprotectiveness

A two-way repeated measures analysis of variance (ANOVA) was conducted to determine whether mothers and fathers differ in levels of overprotectiveness between groups (spina bifida vs. able-bodied). It was expected that parents of children with spina bifida would be more overprotective than parents of able-bodied children. In addition, it was expected that mothers of children with spina bifida would be more overprotective than fathers of children with spina bifida. For these analyses, two within subjects variables were included in each analyses: (Analysis #1) child report of

mother overprotectiveness and child report of father overprotectiveness; (Analysis #2) mother report of overprotectiveness and father report of overprotectiveness; and (Analysis #3) observed levels of maternal overprotectiveness and observed levels of paternal overprotectiveness. Mean scores for all child-, mother-, and father-reported overprotectiveness are shown in Table 4.

The first analysis utilized child-report of parental overprotectiveness. The main effect of group status (spina bifida vs. able-bodied) on parental overprotectiveness was nonsignificant, $F(1, 55) = 2.30, p > .05$ indicating that children in both groups do not report differences in parental overprotectiveness (See figure 3). However, a significant main effect of parental status on child-reported parental overprotectiveness emerged from these analyses, $F(1, 58) = 17.99, p = < .000$, suggesting that mothers and fathers differ in levels of child-reported overprotectiveness. Specifically, children in both groups report that their mothers are more overprotective than their fathers. This main effect was qualified by a significant interaction of child-reported overprotection by parental status, $F(1, 58) = 9.13, p = < .004$. Post hoc t -tests were conducted to confirm the direction of the results obtained in the ANOVA. The results of these analyses indicate that although children with spina bifida report that their mothers and fathers do not differ on levels of overprotectiveness $t(1, 34) = 1.68, p < .001$,

TABLE 4

GROUP DIFFERENCES ON OVERPROTECTIVENESS (WITH GROUP MEANS AND STANDARD DEVIATIONS)

<u>Variable</u>	Spina Bifida M (SD)	Able-Bodied M (SD)	Effect
Child Report of Maternal Overprotectiveness	48.17 (6.91)	47.79 (4.91)	P = <i>sig.</i> GR = <i>ns</i> GRXP = <i>sig.</i>
Child Report of Paternal Overprotectiveness	47.30 (6.43)	42.73 (5.03)	
Mother Report of Overprotectiveness	45.33 (5.38)	42.88 (4.25)	P = <i>ns</i> GR = <i>ns</i> GRxP = <i>ns</i>
Father Report of Overprotectiveness	43.93 (5.08)	42.96 (4.28)	
Observed Maternal Overprotectiveness	33.48 (7.77)	27.28 (4.45)	P = <i>sig.</i> GR = <i>sig.</i> GRxP = <i>mar.</i>
Observed Paternal Overprotectiveness	25.14 (7.63)	21.89 (4.31)	

NOTE. SB = Spina Bifida Group, AB = Able-Bodied Group, P = Main effect for parent, GR = Main effect for group, GR x P = GR x P interaction. See text for overall ANOVA effects.

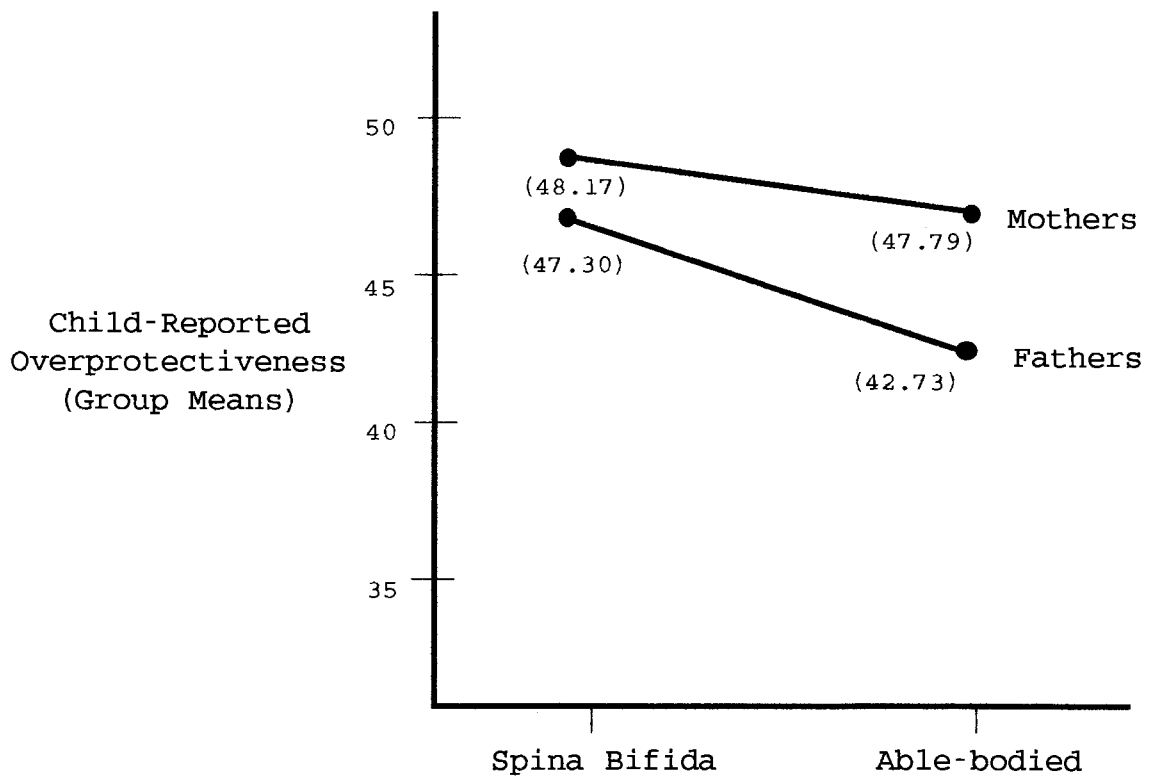


Fig. 3. Levels of child-reported maternal and paternal overprotectiveness.

able-bodied children report that their mothers are more overprotective than their fathers, $t(1, 37) = 3.45, p < .001$. In addition, according to the children interviewed, fathers of children with spina bifida are more overprotective than fathers of able-bodied children $t(1, 71) = 2.22, p < .030$, whereas children with spina bifida and able-bodied children do not report significant differences in maternal overprotectiveness, $t(1, 75) = .88, p > .05$.

The results of an ANOVA utilizing parent report of overprotectiveness yielded nonsignificant main effects for group status, $F(1, 52) = .14, p > .05$ and parental status. In addition, the interaction effect (group x subject) was nonsignificant, $F(1, 52) = .77, p > .05$, suggesting that mothers and fathers in both groups report similar levels of parental overprotectiveness.

An additional analysis employed observational data of parental overprotectiveness. These results revealed a significant main effect of group status on overprotectiveness, $F(1, 56) = 9.68, p = < .003$, suggesting that there are differences in levels of overprotectiveness between parents in the spina bifida sample vs. able-bodied groups, with parents of children with spina bifida observed to be more overprotective than parents of able-bodied children (See Figure 4). A significant main effect of parental status on overprotectiveness also emerged from this analysis, $F(1, 58) = 73.00, p = < .000$, suggesting that

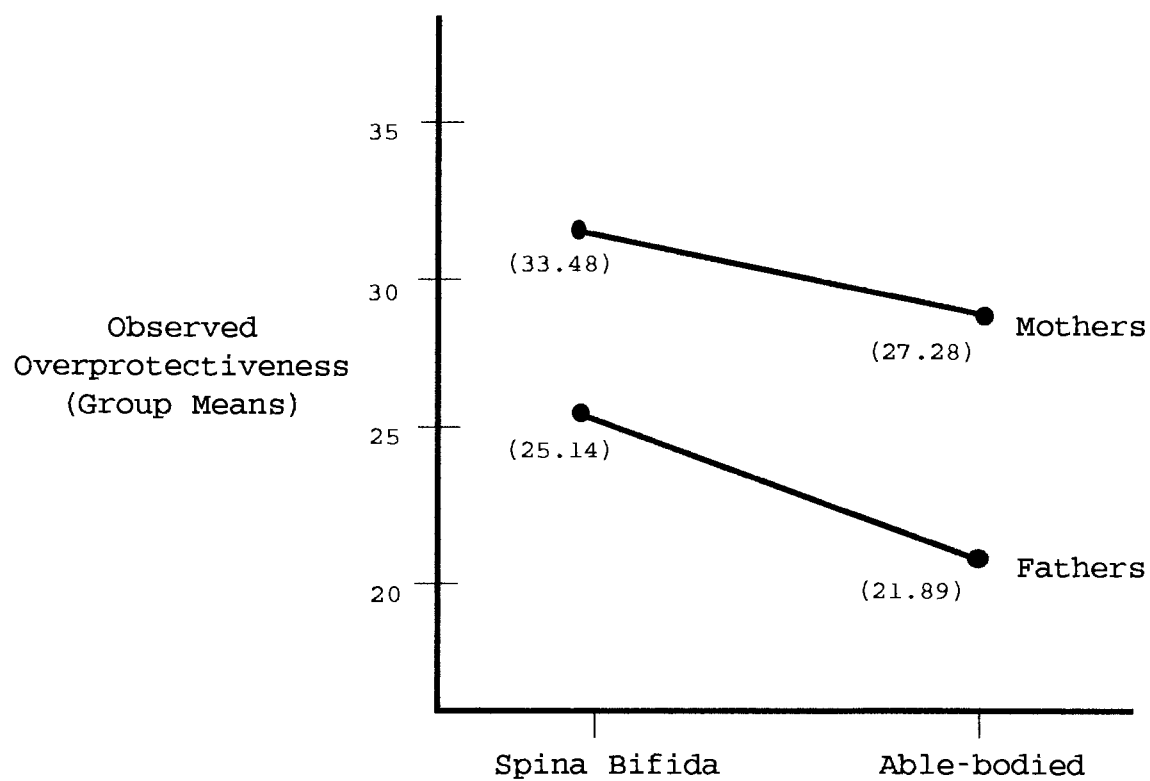


Fig. 4. Levels of observed maternal and paternal overprotectiveness.

mothers and fathers differ in levels of observed overprotectiveness. Mothers were observed to be more overprotective than fathers. These significant main effects were qualified by a marginally significant interaction of group by parental status, $F(1, 58) = 3.49, p = > .05$.

Post hoc t -tests confirm that there are significant differences between mothers and fathers on overprotectiveness in both spina bifida and able-bodied groups, indicating that mothers are more overprotective of both spina bifida $t(1, 28) = 7.12, p < .000$ and able-bodied children $t(1, 26) = 5.04, p < .000$ when compared to fathers. In addition, both mothers $t(1, 73) = 3.07, p < .003$ and fathers $t(1, 45) = 1.98, p < .05$ of children with spina bifida are significantly more overprotective than are mothers and fathers of able-bodied children.

Parental Differences on Behavioral and Emotional Autonomy

The purpose of these analyses was to examine whether parents with high and low levels of parental overprotectiveness have children who differ on behavioral and emotional autonomy. In order to test this, mothers and fathers in both spina bifida and able-bodied groups were split into high and low overprotectiveness groups utilizing median splits on both questionnaire and observational overprotectiveness data. Thus, the following groups were created: high and low

mother-reported overprotectiveness, high and low father-reported overprotectiveness, high and low child-reported maternal overprotectiveness, high and low child-reported paternal overprotectiveness, high and low observed maternal overprotectiveness, high and low observed paternal overprotectiveness, and high and low "child appears overprotected" groups.

Several multivariate analyses of variance (MANOVA's) were conducted (See Table 5), utilizing the following dependent and independent variables: (Analysis #1) dependent variables = child's report of emotional autonomy from mother, child self-report of behavioral autonomy and mother report of child's behavioral autonomy; independent variables = high vs. low mother-reported overprotectiveness, and spina bifida vs. able-bodied groups; (Analysis #2) dependent variables = child's report of emotional autonomy from father, child self-report of behavioral autonomy, and father report of child behavioral autonomy; independent variables = high vs. low father-reported overprotectiveness and spina bifida vs. able-bodied groups; (Analysis #3) dependent variables = child report of emotional autonomy from mother, child self-report of behavioral autonomy, and mother report of child's behavioral autonomy; independent variables = high vs. low child-reported mother overprotectiveness and spina bifida vs. able-bodied groups; (Analysis #4) dependent variables = child report of emotional autonomy from father, child self-report

TABLE 5

ANALYSES EMPLOYED IN THE DETECTION OF PARENTAL DIFFERENCES ON
BEHAVIORAL AND EMOTIONAL AUTONOMY

Analysis#	Dependent Variables	Independent Variables
1.	EA-M (CQ) BA (CQ) BA (MQ)	High vs. Low MOP (MQ) SB vs. AB
2.	EA-F (CQ) BA (CQ) BA (FQ)	High vs. Low FOP (FQ) SB vs. AB
3.	EA-M (CQ) BA (CQ) BA (MQ)	High vs. Low MOP (CQ) SB vs. AB
4.	EA-F (CQ) BA (CQ) BA (FQ)	High vs. Low FOP (CQ) SB vs. AB
5.	EA-M (CQ) BA (CQ) BA (MQ)	High vs. Low MOP (O) SB vs. AB

TABLE 5, CONTINUED

ANALYSES EMPLOYED IN THE DETECTION OF PARENTAL DIFFERENCES ON
BEHAVIORAL AND EMOTIONAL AUTONOMY

Analysis#	Dependent Variables	Independent Variables
6.	EA-F (CQ) BA (CQ) BA (FQ)	High vs. Low FOP (O) SB vs. AB
7.	EA-M (CQ) BA (CQ) BA (MQ) EA-F (CQ) BA (FQ)	High vs. Low COP (O) SB vs. AB

NOTE. CQ=Child Report on Questionnaire, FQ=Father Report on Questionnaire, MQ=Mother Report on Questionnaire, O=Observational data, EA-M=Emotional Autonomy from Mother, EA-F=Emotional Autonomy from Father, BA=Behavioral Autonomy, MOP=Observed Maternal Overprotectiveness, FOP=Observed Paternal Overprotectiveness, COP=Child Appears Overprotected, SB=Spina Bifida Group, AB=Able-Bodied Group.

of behavioral autonomy and father report of child's behavioral autonomy; independent variables = high vs. low child-reported father overprotectiveness and spina bifida vs. able-bodied groups; (Analysis #5) dependent variables = child report of emotional autonomy from mother, child self-report of behavioral autonomy, and mother report of child's behavioral autonomy; independent variables = high vs. low observed mother overprotectiveness and spina bifida vs. able-bodied groups; (Analysis #6) dependent variables = child report of emotional autonomy from father, child self-report of behavioral autonomy, and father report of child's behavioral autonomy; independent variables = high vs. low observed father overprotectiveness and spina bifida vs. able-bodied groups; and (Analysis #7) dependent variables = child report of emotional autonomy from mother, child self-report of behavioral autonomy, mother report of child's behavioral autonomy, child report of emotional autonomy from father, and father report of child's behavioral autonomy; independent variables = high vs. low "child appears overprotected" groups and spina bifida vs. able-bodied groups.

Mother and father self-report of over-protectiveness groups.

The first analysis examined the degree to which high and low mother overprotectiveness groups differ on parent and child reports of child autonomy across groups (spina bifida vs. able-bodied) as defined by questionnaire data. A

significant main effect of maternal overprotectiveness on autonomy emerged from this analysis, $F(1, 68) = 5.75$, $p < .001$, suggesting that mothers in the high and low overprotectiveness groups differed on reports of their children's level of autonomy. See Table 6 for group differences on behavioral and emotional autonomy (with group means and standard deviations).

Additional analyses yielded a nonsignificant main effect for group (spina bifida vs. able-bodied), $F(1, 68) = 1.46$, $p = > .05$ and group X maternal overprotectiveness, $F(1, 68) = .91$, $p = > .05$ on child autonomy, suggesting that high and low maternal overprotectiveness groups do not differ on reports of child autonomy across spina bifida and able-bodied groups.

Univariate follow-up tests revealed that high and low mother overprotectiveness groups differed on one of the variables assessed. Mothers in the low maternal overprotectiveness group reported higher levels of child behavioral autonomy as reported on the Decision Making Questionnaire, $F(1, 68) = 13.28$, $p < .001$.

The second analysis examined the degree to which high and low paternal overprotectiveness groups differ on parent and child reports of child autonomy across groups (spina bifida vs. able-bodied) as defined by questionnaire data. Nonsignificant main effects of paternal overprotectiveness, $F(1, 49) = 1.12$, $p = > .05$, group (spina bifida vs. control), F

TABLE 6

GROUP DIFFERENCES ON AUTONOMY (WITH GROUP MEANS AND STANDARD DEVIATIONS)

Variable	High Overprotectiveness		Low Overprotectiveness		Effect
	SB	AB	SB	AB	
	M (SD)	M (SD)	M (SD)	M (SD)	
<u>Mother Report of Overprotectiveness</u>					
EA-Mother (CR)	30.85 (5.49)	34.36 (5.14)	30.53 (7.19)	30.29 (5.99)	NS
BA (CR)	32.41 (7.90)	33.93 (8.67)	33.24 (7.41)	37.13 (6.04)	NS
BA (MR)	25.54 (5.50)	28.96 (3.59)	30.94 (5.57)	32.60 (3.11)	OP
<u>Father Report of Overprotectiveness</u>					
EA-Father (CR)	30.69 (5.47)	29.64 (6.57)	31.77 (7.17)	31.14 (4.75)	NS
BA (CR)	29.62 (6.74)	34.36 (7.37)	34.18 (8.45)	35.96 (7.48)	NS
BA (FR)	28.14 (7.11)	28.14 (6.80)	31.01 (5.36)	30.80 (6.48)	NS
<u>Child Report of Mother Overprotectiveness</u>					
EA-Mother (CR)	30.86 (4.42)	31.47 (6.42)	30.50 (8.35)	32.00 (5.78)	NS
BA (CR)	31.22 (7.73)	31.93 (7.35)	35.09 (7.01)	38.57 (5.83)	OP
BA (MR)	27.45 (6.18)	29.95 (3.75)	28.47 (6.11)	32.12 (3.49)	NS
<u>Child Report of Father Overprotectiveness</u>					
EA-Father (CR)	30.43 (5.40)	30.71 (5.44)	32.17 (7.28)	30.29 (5.88)	NS
BA (CR)	29.00 (7.79)	29.04 (8.20)	35.28 (6.70)	37.20 (5.91)	OP
BA (FR)	29.36 (8.01)	27.84 (5.67)	29.83 (3.92)	30.01 (6.99)	NS

TABLE 6, CONTINUED

GROUP DIFFERENCES ON AUTONOMY (WITH GROUP MEANS AND STANDARD DEVIATIONS)

Variable	High Overprotectiveness		Low Overprotectiveness		Effect
	SB	AB	SB	AB	
	M (SD)	M (SD)	M (SD)	M (SD)	
<u>Observed Maternal Overprotectiveness</u>					
EA-Mother (CR)	28.81 (6.06)	32.21 (6.78)	33.57 (5.35)	31.68 (5.77)	NS
BA (CR)	32.13 (6.82)	35.27 (8.03)	33.72 (8.81)	36.28 (7.06)	NS
BA (MR)	26.94 (7.23)	30.01 (3.16)	29.22 (3.60)	31.85 (3.77)	NS
<u>Observed Paternal Overprotectiveness</u>					
EA-Father (CR)	30.46 (6.12)	30.00 (4.26)	31.75 (6.80)	30.29 (6.83)	NS
BA (CR)	29.78 (6.49)	33.29 (8.25)	34.35 (9.04)	36.60 (6.46)	NS
BA (MR)	28.41 (7.14)	26.76 (5.20)	30.72 (5.69)	31.71 (7.29)	NS
<u>Child Appears Overprotected</u>					
EA-Mother (CR)	30.26 (5.67)	36.75 (8.85)	31.33 (8.76)	31.96 (5.77)	NS
BA (CR)	32.25 (7.23)	36.30 (5.70)	31.11 (10.85)	34.66 (7.93)	NS
BA (MR)	28.87 (5.69)	31.75 (3.30)	30.47 (5.12)	31.26 (4.15)	NS
EA-Father (CR)	32.11 (5.99)	33.25 (9.36)	28.67 (7.50)	29.72 (4.93)	NS
BA (FR)	29.62 (7.05)	33.25 (4.86)	30.76 (2.83)	28.83 (6.98)	NS

NOTE. SB = Spina Bifida Group, AB = Able-Bodied Group, EA = Emotional Autonomy, BA = Behavioral Autonomy, CR = Child Report, MR = Mother Report, FR = Father Report, OP = Main effect for overprotection, GR = Main effect for group, OP x GR = OP x GR interaction. See text for overall MANOVA effects.

(1,49) = .76, $p = > .05$, and paternal overprotectiveness X group, $F(1,49) = .16$, $p = > .05$ on autonomy emerged from the analysis suggesting that fathers did not differ in terms of reported child autonomy across spina bifida and able-bodied groups, and across high and low overprotectiveness groups.

Child report of mother and father over-protectiveness groups.

The purpose of the third analysis was to examine the degree to which high and low maternal overprotectiveness groups differ on parent and child reports of child autonomy across spina bifida and able-bodied groups as defined by the child's report of maternal overprotectiveness. Significant main effects of maternal overprotectiveness on autonomy emerged from the analysis utilizing child report of maternal overprotectiveness, $F(1, 68) = 3.72$, $p = < .016$. This finding suggests that high and low child-reported maternal overprotectiveness groups differ on reports of child autonomy.

An additional analysis revealed a nonsignificant main effect of group (spina bifida vs. able-bodied) on autonomy for child-reported maternal overprotectiveness groups $F(1, 68) = 1.04$, $p = > .05$, suggesting that mothers did not differ in terms of reported child autonomy across spina bifida and able-bodied groups. Lastly, a nonsignificant interaction effect (maternal overprotectiveness X group) emerged for the

child reported maternal overprotectiveness groups, $F(1, 68) = .14, p = > .05$.

Univariate follow-up tests revealed that high and low child-reported maternal overprotectiveness groups differed on one of the variables assessed. Children of mothers in the low overprotectiveness group reported higher levels of behavioral autonomy as reported on the Decision Making Questionnaire, $F(1, 68) = 9.90, p < .002$.

The purpose of the fourth analysis was to examine the degree to which high and low paternal overprotectiveness groups differ on reports of child autonomy across spina bifida and able-bodied groups as defined by the child's report of paternal overprotectiveness. Significant main effects of paternal overprotectiveness on autonomy emerged from the analysis utilizing child report of paternal overprotectiveness, $F(1, 49) = 3.85, p = < .015$. This finding suggests that high and low child-reported paternal overprotectiveness groups differ on reports of child autonomy.

In a separate analysis, a nonsignificant main effect of group (spina bifida vs. able-bodied) emerged for the child-reported paternal overprotectiveness groups on autonomy, $F(1, 49) = .16, p = > .05$, suggesting that fathers did not differ in terms of reported child autonomy across spina bifida and able-bodied groups. Lastly, a nonsignificant interaction effect (paternal overprotectiveness x group)

emerged for child reported paternal overprotectiveness groups, $F(1, 49) = .27, p > .05$.

Univariate follow-up tests revealed that high and low child-reported paternal overprotectiveness groups differed on one of the variables assessed. Children who reported their fathers to be less overprotective also reported higher levels of behavioral autonomy, as reported on the Decision Making Questionnaire, $F(1, 49) = 11.86, p < .001$.

Observed mother and father overprotectiveness groups.

The purpose of the fifth analysis was to examine the degree to which high and low maternal overprotectiveness groups (as defined by observational data) differ on parent and child reports of child autonomy across spina bifida and able-bodied groups.

Nonsignificant main effects of maternal overprotectiveness, $F(1, 66) = 1.47, p > .05$ and group (spina bifida vs. control), $F(1, 66) = .91, p > .05$ on autonomy emerged from the analysis utilizing the observed maternal overprotectiveness data, suggesting that mothers observed high and low maternal overprotectiveness groups did not differ on reports of child autonomy. Similarly, the spina bifida and able-bodied groups also did not differ. An analysis of interaction effects (maternal overprotectiveness X group) also revealed a nonsignificant finding, $F(1, 66) = 1.08, p > .05$.

The purpose of the sixth analysis was to examine the degree to which high and low paternal overprotectiveness groups (as defined by observational data) differ on parent and child reports of child autonomy across spina bifida and able-bodied groups. A marginally significant main effect of observed paternal overprotectiveness groups on autonomy was revealed, $F(1, 47) = 2.38, p = < .08$. This finding suggests that fathers in the high and low overprotectiveness groups differ significantly on levels of reported child autonomy.

Univariate follow-up tests revealed significant effects on two of the variables assessed. Fathers in the observed low overprotectiveness group reported that their children are more behaviorally autonomous, $F(1, 47) = 4.76, p = < .03$, as reported on the Decision Making Questionnaire. Moreover, children in this group also reported greater levels of behavioral autonomy as reported in the Decision Making Questionnaire, $F(1, 47) = 4.32, p < .04$.

A nonsignificant main effect of group (spina bifida vs. able-bodied) $F(1, 47) = .59, p > .05$ on autonomy emerged from the analysis utilizing the observed paternal overprotectiveness data, suggesting that fathers did not differ on reports of child autonomy across spina bifida and able-bodied groups. An analysis of the interaction effect (paternal overprotectiveness X group) also revealed a nonsignificant finding, $F(1, 47) = .31, p > .05$.

"Child appears overprotected" groups.

The purpose of the seventh analysis was to examine the degree to which high and low "child appears overprotected" groups (as defined by observational data) differ on reports of autonomy across spina bifida and able-bodied groups. A nonsignificant main effect of high and low "child appears overprotected" groups, $F(1, 45) = .83, p > .05$ and group (spina bifida vs. able-bodied) $F(1, 45) = .99, p > .05$, and a nonsignificant overprotected child x group interaction $F(1, 45) = .94, p > .05$ emerged in this analysis, suggesting that children do not differ on autonomy across high and low overprotected groups or across spina bifida and able-bodied groups.

CHAPTER 6

DISCUSSION

The purpose of this study was to examine the impact of parental overprotectiveness on autonomy among adolescents with spina bifida. More specifically, group differences (spina bifida vs. able-bodied) and differences due to high versus low overprotectiveness on levels of emotional and behavioral autonomy were examined. An additional purpose was to determine whether there were group differences and parental differences (mother vs. father) on levels of overprotectiveness between the two samples.

Preliminary Results

Pearson correlations were computed to examine the relationship between all overprotectiveness variables, with correlations computed for questionnaire data, observational data, and questionnaire and observational data combined. The following significant pairs of correlations were detected:

- 1). Questionnaire data: child report of father overprotectiveness and child report of mother overprotectiveness; child report of father overprotectiveness and mother report of overprotectiveness; father report of overprotectiveness and child report of father

overprotectiveness; 2.) Observational data: child appears overprotected and mother overprotectiveness; and father overprotectiveness and mother overprotectiveness;

3.) Questionnaire and observational data: observed child appears overprotected and mother report of overprotectiveness; and observed mother overprotectiveness and mother report of overprotectiveness. The correlations between those variables that were significant supports the validity of the overprotectiveness construct. However, although several pairs of variables were significantly correlated, the relatively low magnitude of these correlations supported the use of the questionnaire and observational variables in separate analyses.

Interrater reliability was assessed across two raters for all observational overprotectiveness variables. At the item level, intraclass correlations ranged from .40 to .88 for game, conflict, and warm-up tasks. At the scale level (parent, mother, father, and child items combined into separate scales for the game, conflict, and warm-up tasks), intraclass correlations ranged from .58 to .89. Composite interrater reliability correlations for the Parental overprotectiveness, Mother overprotectiveness, Father overprotectiveness, and "Child appears overprotected" scales ranged from .78 to .88. A method developed by Landis and Koch (1977) was utilized in order to assess the strength of observer reliability for categorical data. Within this

system, categories were created corresponding to Kappa statistics to measure interobserver agreement. As such, alphas less than 0.00 are considered Poor, alphas ranging from 0.00 - 0.20 are Slight, alphas ranging from 0.21-0.40 are Fair, alphas ranging from 0.41-0.60 are Moderate, alphas ranging from 0.61-0.80 are Substantial, and alphas ranging from 0.81 - 1.00 are Almost Perfect. Applying this categorical system to the intraclass correlations obtained for the observational data suggests that at the item level, agreement ranged from Moderate to Substantial, with mean intraclass correlations falling within the Substantial category. At the scale level, reliability was somewhat improved, with alphas corresponding primarily to the Substantial to Almost Perfect categories. This suggests that the extent to which the different observers agreed on the scores they provided when coding overprotectiveness among parents and children was adequate, and that the observational measure of overprotectiveness has good psychometric properties.

Reliability estimates (alphas) were computed by combining questionnaire items into several composite scales. For the overprotectiveness scales, (child report of mother overprotectiveness, child report of father overprotectiveness, father overprotectiveness, and mother overprotectiveness) alphas ranged from .58 to .78. For the behavioral autonomy scales (child report of behavioral

autonomy, mother report of child's behavioral autonomy, and father report of child's behavioral autonomy) alphas ranged from .70 to .82. Similarly, alphas corresponding to the emotional autonomy scales (child report of emotional autonomy from mother and child report of emotional autonomy from father) were .62 and .60, respectively. These alpha levels suggest that the degree of consistency of the items within each scale was adequate, supporting the use of each scale.

Parental Differences on Overprotectiveness

In terms of parental differences on levels of overprotectiveness, significant findings emerged for the child report of parental overprotectiveness and observed parental overprotectiveness data (although not for the parent-report of overprotectiveness). Higher levels of overprotectiveness were reported in the spina bifida vs. the able-bodied sample. This finding is in line with the first hypothesis.

Generalizing to the child-report of parental overprotectiveness, mothers of children with spina bifida were as overprotective as fathers of children with spina bifida. Although research to date has not examined gender differences in paternal overprotectiveness, it was expected that mothers would be more likely to overprotect because they are likely to comply with the traditional role of primary caretaker, and because Levy's (1966) theory of overprotection suggests that mothers tend to favor their chronically ill

child. This expectation was not supported by the child report for children with spina bifida but was observed among able-bodied children. It was supported for observed overprotectiveness in both spina bifida and able-bodied groups.

Given that spina bifida places many caretaking demands on the family (Floyd and Zmich 1991), perhaps within this sample, these responsibilities are shared by both mothers and fathers. According to Levy's (1966) theory of overprotectiveness, illness per se does not produce overprotection. Rather, frequent care which is required of certain chronic illnesses results in greater amounts of contact which may lead to overprotectiveness. As such, mothers and fathers of children with spina bifida in this sample may have similar amounts of contact with the ill child, performing medical routines and other caretaking duties. Although Levy (1966) suggests that mothers tend to favor the ill child because the child is likely to be more dependent on the mother than other family members, perhaps this interpretation does not apply to contemporary families caring for a child with spina bifida, particularly in situations where the parents share caretaking responsibilities. The demands of spina bifida might require parental involvement on the part of both mothers and fathers, leading to the perception of equal amounts of maternal and

paternal overprotectiveness when utilizing child report of parental overprotectiveness.

The results of this study also suggest that the level of parental overprotectiveness in mothers and fathers caring for a child with spina bifida is not significantly different from overprotectiveness levels in mothers of able-bodied children. As a result of shared caretaking responsibilities, and given that the children in this study have obtained a congenital (vs. acquired) illness, perhaps mothers and fathers caring for a child with spina bifida are similarly overprotective (when compared to mothers of able-bodied children) due to a familiarity with the emotional and physical demands of the illness and the development of realistic expectations for their child over time. In addition, it is possible that mothers do not appear to be more overprotective than fathers because fathers share more of the caretaking responsibilities in families caring for a child with spina bifida. As such, it may be hypothesized that spina bifida demands more caregiving so a fathers' involvement increases, while the mothers' is constant.

Interestingly, results of this study also revealed that fathers of able-bodied children were significantly less overprotective when compared to mothers of able-bodied children, and when compared to mothers and fathers of children with spina bifida. It is possible that parents of able-bodied children in this sample follow more traditional

caretaking roles, such that mothers are the primary caretakers when compared to fathers. In this way, fathers of able-bodied children who are not as accustomed to caring for their child on a routine basis would be perceived as less overprotective than would mothers, according to the child.

The results of the analysis utilizing parent report of overprotectiveness were nonsignificant, suggesting that parents in both groups (spina bifida vs. able-bodied) do not report differences in overprotectiveness.

The results of an analysis utilizing observational reports of overprotectiveness reveal that mothers and fathers of children with spina bifida were observed to be more overprotective than mothers and fathers of able-bodied children. Although this finding is in line with the first hypothesis, a rank ordering of overprotectiveness was revealed among both groups of parents (spina bifida vs. able-bodied). Specifically, mothers of children with spina bifida were observed to be more overprotective than fathers of children with spina bifida, followed by mothers of able-bodied children. The least overprotective group based on observation was fathers of able-bodied children. In addition, children with spina bifida were observed to be more overprotected than able-bodied children.

These findings support the results utilizing child report data. According to both children in this study and unbiased observers, parents of children with spina bifida are more

overprotective than are parents of able-bodied children. Moreover, in this analysis as well, fathers of able-bodied children are the least overprotective.

In addition, these findings broaden our understanding of the concept of overprotectiveness within this population. Of particular interest is the finding that parents of both groups were rank ordered on levels of overprotectiveness (mothers of children with spina bifida > fathers of children with spina bifida > mothers of able-bodied children > fathers of able-bodied children). Contrary to the results obtained utilizing child report of parental overprotectiveness, these findings suggest that parents of children with spina bifida differ in levels of overprotectiveness, such that mothers are more overprotective than fathers. It is possible that differences in the results of analyses utilizing child report, parent report, and observation may be due to self-report versus observational methods of measurement. It is possible that children and parents in both groups may be somewhat biased in their opinions, which may account for children with spina bifida reporting no differences in parental overprotectiveness, and parents in both groups reporting no differences in overprotectiveness as well. As such, perhaps their reports are not quite as valid when compared to unbiased observers. These results suggest that observational methods may be more factual for the detection of overprotectiveness among families of both chronically-ill

and able-bodied children. In addition, findings suggest that perhaps both methods of measurement should be utilized for a complete understanding of the concept.

Alternatively, differences between observational data versus self-report data may be due to the nature of the observational tasks compared to the self-report questionnaires. For example, the observational tasks (e.g., warm-up, game and conflict tasks) represent novel tasks (versus everyday activities or routine tasks). As such, according to Johnson & Bolsted (1973), naturalistic and artificial conditions do not correlate highly, limiting cross-situational generalizability. Thus, it would be highly unlikely that the results based on questionnaire versus observational data would be identical, unless perhaps the population under study were highly overprotective, in which case it might be expected that overprotective behavior would generalize across both novel and routine tasks.

In fact, an examination of the mean scores of mothers and fathers in each group (spina bifida verses controls) with respect to questionnaire and observational data on overprotectiveness (See Table 4) reveals that parents in this study were not highly overprotective. Across all analyses (utilizing mother-, father-, and child-report), mean scores fell slightly below the midpoint, suggesting a moderate degree of overprotectiveness.

Group and Parental Differences in Autonomy

Results of this study suggest that spina bifida and able-bodied children do not differ on levels of emotional and behavioral autonomy. It was expected that differences between groups would emerge on levels of emotional and behavioral autonomy, such that children with spina bifida would display lower levels of emotional and behavioral autonomy when compared to an able-bodied group of children. To the contrary, results suggest that children in both groups regard their parents as similar in terms of acceptance and support, according to child report of emotional autonomy. In addition, the parents and children in both groups report that the degree to which children make decisions independently is similar.

This study relied on self-report measures of both emotional and behavioral autonomy, which may account for the lack of significant differences on autonomy between groups. As the overprotectiveness findings from this study suggest, observational methods may be valid for the detection of behaviors which may otherwise remain undisclosed with the use of self-report alone. In this way, for example, it is possible that had both methods of measurement been employed, differences on levels of autonomy between questionnaire and observational data may have been revealed.

In addition to nonsignificant group differences, parental differences on levels of emotional autonomy were not

detected. This finding suggests that by self-report, children in both groups consider themselves equally emotionally autonomous, and in addition, they report that they are equally autonomous whether their parents are high versus low in overprotectiveness. It is possible that group and parental differences were not detected with respect to emotional autonomy because this was not a salient construct for this sample. It has been suggested that the process of achieving autonomy occurs during early adolescence (Allen et al. 1994; Ryan and Lynch 1989; Ricks 1985). The chronological ages which delimit the period of adolescence have been defined in several ways within the literature (Holmbeck 1994; Paikoff and Brooks-Gunn 1991; for example). The mean age of participants in this study was 8.47 and 8.69 years (spina bifida and able-bodied children, respectively). Some may consider these participants early adolescents, while others would consider them too young to have entered into adolescence. In general, the concept of emotional autonomy has been applied to early adolescents in terms of a psychoanalytic framework. Similar to the process of individuation, the child sheds earlier dependencies on his/her parents rather than abruptly detaching from them (Steinberg and Silverberg 1986). Although emotional autonomy has been conceptualized in theoretical terms for a pre-adolescent age group, a review of the literature yields no empirical studies conducted with pre-adolescents younger than

11 years of age. Therefore, it is uncertain whether the development of emotional autonomy follows this course during early adolescence.

As such, it may be hypothesized based on the results of this study that varying levels of emotional autonomy would not be detected in this sample of children because parents remain the primary source of emotional support for children at this young age. Because the opportunities for decision-making may be more prevalent in the daily lives of individuals, it is expected that behavioral autonomy would be a more salient construct for even young adolescents.

In contrast to nonsignificant findings for emotional autonomy, significant effects of overprotectiveness on behavioral autonomy were found. This study also revealed that when parents were divided into high and low overprotectiveness groups, significant parental differences on levels of behavioral autonomy were detected. Specifically, when mothers and fathers were defined as high or low in overprotectiveness (by child report of mother and father overprotectiveness as well as mother self-report of overprotectiveness), differences in behavioral autonomy emerged. That is, children who perceive their parents as high in levels of overprotectiveness have mothers and fathers who report lower levels of behavioral autonomy. Similarly, mothers who report that they are high in levels of overprotectiveness also report lower levels of behavioral

autonomy. An additional marginal finding among the observed paternal overprotectiveness groups suggested that fathers who are highly overprotective also report lower levels of behavioral autonomy, and have children who report lower levels of behavioral autonomy as well. This finding supports the validity of the observational measure of overprotectiveness.

The findings regarding emotional autonomy suggest that children with spina bifida and able-bodied children regard their parents as equally accepting, encouraging, and supportive of their independence and autonomy. However, although these parents may be as emotionally supportive as parents who do not overprotect, they may not be willing to grant this independence when it comes to allowing their children to make decisions independently. Thus, it appears that for parents who overprotect, there may be a conflict between a desire to foster independence and to protect their child from harm. However, given that there were no detectable differences on behavioral autonomy between the able-bodied and spina bifida groups, it appears that the effects of overprotectiveness on autonomy are similar for the spina bifida and able-bodied groups.

Clinical Implications

The results of this study have several implications for clinical practice. Results suggest that children with spina bifida are more overprotected than able-bodied children in a

novel experimental situation. However, parents do not perceive this difference in daily life but their children perceive fathers but not their mothers as being overprotective (relative to controls). Moreover, this study also suggests that those who overprotect are less likely to grant behavioral autonomy to their children. The deleterious effects of being raised by an overprotective parent have been documented (Miller et al. 1992; Tearnan and Telch 1988; Parker, Kiloh and Hayward 1987; Plantes et al. 1988; Whisman and Kwon 1992; Gotlib et al. 1988; Burbach, Kashani and Rosenberg 1989; McFarlane 1987; Wertheim et al. 1992), as have the negative outcomes from a lack of autonomy (Olsen, Sprenkle and Russell 1979; O'Brien 1989; Gavazzi and Sabatelli 1990; Gavazzi, Anderson and Sabatelli 1993; Ryan and Lynch 1989; Steinberg and Silverberg 1986; Holmbeck 1992; Holmbeck and O'Donnell 1991). The long term outcome of overprotectiveness combined with a lack of autonomy is unknown, but may be particularly harmful.

However, results of this study must be interpreted with caution, since levels of parental overprotectiveness were not extreme. Moreover, it is unclear at what point parental "protection" becomes "overprotectiveness." It is possible that among children with spina bifida, a slightly higher level of parental overprotectiveness (relative to able-bodied parents) may not be pathological. Instead, given the demands of the illness, coupled with the uncertainty of the child's

prognosis, it may be that parental "protection" serves an adaptive function. For example, these parents are likely to be more attuned to the sometimes subtle changes in their child's behavior which may warrant medical attention (e.g., symptoms related to shunt malfunction, such as headaches, increased sleepiness, nausea).

According to Thomasgard et al. (1995), overprotectiveness is not an area typically examined by health care workers during routine visit. Thus, it may be useful for health care workers to be cognizant of parental overprotectiveness and to include explicit questions as part of a comprehensive evaluation of the patient and his/her family. Moreover, it may be useful for physicians and for health care workers to educate parents about the benefits of parental "protection" as it might apply to their child's medical issues, for example, but to also encourage self-reliance through increased independent decision-making.

Limitations

This study has several limitations, each of which may be useful future directions. First, the results of this study must be interpreted with caution, specifically in terms of generalization. The findings from this study may not apply to all chronically ill children. Spina bifida is a congenital, (vs. acquired) illness, with several unique demands for both the patient and his/her family. The specific demands of spina bifida are likely to influence the development of

overprotectiveness in ways that are particular to this illness.

With respect to the age of the adolescent participants, the conclusions drawn from this study may not generalize to an older sample of children. In this study, group and parental differences in emotional autonomy were not detected. It is possible that among an older sample of children, emotional autonomy may be a salient factor. As such, differences in emotional autonomy among high and low overprotected groups might be detected, given that it is likely that an older adolescent has developed other significant relationships in addition to his/her parents, and has established a greater degree of independence from parental influences.

Additionally, this study was conducted with a relatively homogenous group of families. Participants in this study were primarily Caucasian, intact, middle-class families. Results may not generalize to families of varying racial, ethnic, and socioeconomic groups.

In terms of the construct of autonomy, it has been suggested that autonomy has been conceptualized in several different ways (Freud 1958; Hill and Holmbeck 1986; Steinberg and Silverberg 1986). The results of this study are specific to behavioral and emotional autonomy, and results may not generalize to other conceptualizations of the construct.

The results of this study suggest that parents who overprotect are less likely to grant behavioral autonomy to their children. In this study, behavioral autonomy was measured with the Decision-Making Questionnaire, which includes issues relevant to decision making in a family setting (e.g., when the child has to do chores, what the child is allowed to watch on television). As Achenbach, McConaughy and Howell (1987) have suggested, certain childhood behaviors are situation specific. As such, children who are overprotected may not be independent decision-makers at home, but may exhibit increased levels of independent decision-making in other settings, such as in a school setting, or within peer relationships.

Lastly, it has been suggested that individual differences can influence the way family relationships are formed, and subsequently the granting or inhibiting of autonomy (Steinberg 1994). This study was concerned with one of these factors- overprotection, and its relationship to autonomy. However, this study does not imply that there is a causal relationship between overprotectiveness and lower levels of autonomy. As Thomasgard et al. (1995) has emphasized, research on overprotectiveness should be geared towards examining the sources and influences of overprotectiveness, in order to fully understand how individual differences in overprotectiveness may influence

the achievement of typical developmental tasks. This study underscores that there are differences within the parent-child relationship, within the context of families caring for both chronically-ill and able-bodied children. Future research should attempt to identify the individual factors which contribute to the development and maintenance of differential levels of overprotectiveness among mothers and fathers of both able-bodied and chronically ill children, and its impact on the development of autonomy.

Moreover, this study attempted to identify whether children with spina bifida are more overprotected than able-bodied children. However, this study did not attempt to identify the specific ways in which parents overprotect. Several components of overprotectiveness have been identified (e.g., excessive contact, infantilization, prevention of independent behavior, excessive parental control, etc.), all of which were included within this study. Future research should attempt to identify which factors are most influential in the development of overprotectiveness.

Lastly, this study was not designed as a longitudinal study. The results of this study suggest that children with spina bifida are more overprotected than able-bodied children, and that mothers and fathers who display higher levels of overprotectiveness grant less behavioral autonomy to their children. However, this study does not imply that the level of overprotectiveness exhibited by parents in this

study is pathological. Future studies should focus on determining at what level and under what circumstances parental overprotectiveness is deemed maladaptive. As mentioned, moderate levels of parental overprotectiveness among families caring for a chronically ill child may be beneficial in terms of parental monitoring of illness related issues. However, given that parents who overprotect grant less behavioral autonomy to their children, it may be that under certain conditions, a moderate amount of overprotectiveness leads to negative outcomes. As such, it would be beneficial to monitor these children over time, to assess the long term outcome of moderate levels of parental overprotectiveness combined with a lack of autonomy.

APPENDIX A
PARENT AND CHILD SELF-REPORT QUESTIONNAIRES

CHILD SELF-REPORT QUESTIONNAIRES

Parental Bonding Instrument items: Child Report of Mother
Prevention of Independent Behavior subscale items:

1. My mother lets me do the things I like doing.
2. My mother allows me to make my own decisions.
3. My mother lets me decide things for myself.
4. My mother lets me dress in any way I please.

Infantilization subscale items:

5. My mother does not want me to grow up.
6. My mother likes to baby me.

Scoring: For each item, children are asked to choose the response that most closely describes the way his/her MOTHER acts towards him/her by using the following scale:

If you think the statement is NOT LIKE your MOTHER, circle a "1".

If you think that the statement is SOMEWHAT LIKE your MOTHER, circle a "2".

If you think that the statement is A LOT LIKE your MOTHER, circle a "3".

Parental Bonding Instrument items: Child Report of Father
Prevention of Independent Behavior subscale items:

1. My father lets me do the things I like doing.
2. My father allows me to make my own decisions.
3. My father lets me decide things for myself.
4. My father lets me dress in any way I please.

Infantilization subscale items:

5. My father does not want me to grow up.
6. My father likes to baby me.

Scoring: For each item, children are asked to choose the response that most closely describes the way his/her FATHER acts towards him/her by using the following scale:

If you think the statement is NOT LIKE your FATHER, circle a "1".

If you think that the statement is SOMEWHAT LIKE your FATHER, circle a "2".

If you think that the statement is A LOT LIKE your FATHER, circle a "3".

Child Report of Parental Behavior Instrument items:Child Report of Mother*Hostile Control subscale items:*

1. My mother is always telling me how I should behave.
2. My mother tells me exactly how to do my work.
3. My mother usually forgets the things that I do wrong.
4. My mother would like to be able to tell me what to do all the time.
5. My mother loses her temper with me when I don't help around the house.
6. My mother wants to control whatever I do.
7. My mother is always trying to change me.
8. My mother likes the way I act at home.

Lax Discipline subscale items:

9. My mother is easy with me.
10. My mother lets me off easy when I do something wrong.
11. My mother excuses my bad behavior.
12. My mother wants me to obey, even if I complain and protest.
13. My mother can be talked into things easily.

Intrusiveness subscale items:

14. My mother wants to know exactly where I am and what I am doing.
15. My mother is always checking on what I have been doing at school or while playing.
16. My mother asks me to tell her everything that happens when I am away from home.
17. My mother keeps a careful check on me to make sure that I have the right kind of friends.
18. My mother asks people what I do away from home.

Scoring: For each item, children are asked to choose the response that most closely describes the way his/her MOTHER acts towards him/her by using the following scale:

If you think the statement is NOT LIKE your MOTHER, circle a "1".

If you think that the statement is SOMEWHAT LIKE your MOTHER, circle a "2".

If you think that the statement is A LOT LIKE your MOTHER, circle a "3".

Child Report of Parental Behavior Instrument items:

Child Report of Father

Hostile Control subscale items:

1. My father is always telling me how I should behave.
2. My father tells me exactly how to do my work.
3. My father usually forgets the things that I do wrong.
4. My father would like to be able to tell me what to do all the time.
5. My father loses his temper with me when I don't help around the house.
6. My father wants to control whatever I do.
7. My father is always trying to change me.
8. My father likes the way I act at home.

Lax Discipline subscale items:

9. My father is easy with me.
10. My father lets me off easy when I do something wrong.
11. My father excuses my bad behavior.
12. My father wants me to obey, even if I complain and protest.
13. My father can be talked into things easily.

Intrusiveness subscale items:

14. My father wants to know exactly where I am and what I am doing.
15. My father is always checking on what I have been doing at school or while playing.
16. My father asks me to tell him everything that happens when I am away from home.
17. My father keeps a careful check on me to make sure that I have the right kind of friends.
18. My father asks people what I do away from home.

Scoring: For each item, children are asked to choose the response that most closely describes the way his/her FATHER acts towards him/her by using the following scale:

If you think the statement is NOT LIKE your FATHER, circle a "1".

If you think that the statement is SOMEWHAT LIKE your FATHER, circle a "2".

If you think that the statement is A LOT LIKE your FATHER, circle a "3".

DECISION MAKING QUESTIONNAIRE: CHILD REPORT

Questionnaire Items:

1. Whether I do chores around the house.
2. When I have to do my homework.
3. How much time I have to spend on homework each day.
4. What time I have to be home.
5. How I spend my own money.
6. What sorts of clothes I wear to school.
7. Which friends I spend time with.
8. What time I have to go to sleep on school nights.
9. How I spend my time after school.
10. Whether I have to let my parents know where I am when I go out.
11. Whether I can have friends over when my parents aren't home.
12. Whether I have to go on family visits or outings.
13. What I can watch on television.
14. How much time I spend with my friends.
15. What clubs or hobbies I am involved with.
16. How I do my catheterization.
17. Whether I take my pills.
18. How I do my bowel program.
19. What sorts of foods I eat.
20. How I put on my braces/splints or use my wheelchair.
21. Whether I do my skin checks.
22. Whether I do my pressure releases.
23. How I do my ROM exercises.

Scoring: Children are asked to choose one response for each item. Response items include: 1.) My parents tell me exactly what to do; 2.) My parents and I discuss this together, but they usually have the final say; 3.) My parents and I discuss this together, but I usually have the final say; and, 4.) My

parents leave this up to me to decide. If a particular item is not something their family makes decisions about, they are requested to check the answer "Does not apply."

EMOTIONAL AUTONOMY SCALE: CHILD REPORT FOR MOTHER

Questionnaire items:

1. I wish my mother would understand who I really am.
2. My mother hardly ever makes mistakes.
3. My mother and I agree on everything.
4. I go to my mother for help before trying to solve a problem myself.
5. Even when my mother and I disagree, my mother is always right.
6. It's better for kids to go to their best friend than to their mother for advice.
7. Whenever I've done something wrong, I depend on my mother to straighten things out for me.
8. There are some things my mother doesn't know about me.
9. My mother knows everything there is to know about me.
10. I try to have the same opinions as my mother.
11. If I was having a problem with one of my friends, I would discuss it with my mother before deciding what to do about it.
12. My mother would be surprised to know what I'm like when I'm not with her.
13. When I become a parent, I'm going to treat my children in exactly the same way that my mother has treated me.
14. There are things that I will do differently from my mother when I become a parent.

Scoring: The child is asked to indicate how much s/he agrees with each statement by using the following scale:

1	2	3	4
Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree

EMOTIONAL AUTONOMY SCALE: CHILD REPORT FOR FATHER

Questionnaire items:

1. I wish my father would understand who I really am.
2. My father hardly ever makes mistakes.
3. My father and I agree on everything.
4. I go to my father for help before trying to solve a problem myself.
5. Even when my father and I disagree, my father is always right.
6. It's better for kids to go to their best friend than to their father for advice.
7. Whenever I've done something wrong, I depend on my father to straighten things out for me.
8. There are some things my father doesn't know about me.
9. My father knows everything there is to know about me.
10. I try to have the same opinions as my father .
11. If I was having a problem with one of my friends, I would discuss it with my father before deciding what to do about it.
12. My father would be surprised to know what I'm like when I'm not with him.
13. When I become a parent, I'm going to treat my children in exactly the same way that my father has treated me.
14. There are things that I will do differently from my father when I become a parent.

Scoring: The child is asked to indicate how much s/he agrees with each statement by using the following scale:

1	2	3	4
Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree

PARENT SELF-REPORT QUESTIONNAIRES

Parental Bonding Instrument items:Mother and Father Report*Prevention of Independent Behavior:*

1. I let my child do the things s/he likes doing.
2. I like my child to make his/her own decisions.
3. I let my child decide for himself/herself.
4. I let my child dress in any way s/he pleases.

Infantilization:

5. I don't want my child to grow up.
6. I like to baby my child.

Scoring: For each item, parents are asked to choose the response that most closely describes the way their CHILD acts towards him/her by using the following scale:

If you think the statement is NOT LIKE your CHILD, circle a "1".

If you think that the statement is SOMEWHAT LIKE your CHILD, circle a "2".

If you think that the statement is A LOT LIKE your CHILD, circle a "3".

CHILD REPORT OF PARENTAL BEHAVIOR INSTRUMENT: PARENT REPORT

Hostile Control subscale items:

1. I am always telling my child how s/he should behave.
2. I tell my child exactly how to do his/her work.
3. I usually forget the things that my child does wrong.
4. I would like to be able to tell my child what to do all the time.
5. I lose my temper with my child when s/he doesn't help around the house.
6. I want to control whatever my child does.
7. I am always trying to change my child.
8. I like the way my child acts at home.

Lax Discipline subscale items:

9. I am easy with my child.
10. I let my child off easy when s/he does something wrong.
11. I excuse my child's bad behavior.
12. I want my child to obey, even if s/he complains and protests.
13. I can be talked into things easily.

Intrusiveness subscale items:

14. I want to know exactly where my child is and what s/he is doing.
15. I am always checking on what my child has been doing at school or while playing.
16. I ask my child to tell me everything that happens when s/he is away from home.
17. I keep a careful check on my child to make sure that s/he has the right kind of friends.
18. I ask people what my child does away from home.

Scoring: For each item, parents are asked to choose the response that most closely describes the way their CHILD acts towards him/her by using the following scale:

If you think the statement is NOT LIKE your CHILD, circle a "1".

If you think that the statement is SOMEWHAT LIKE your CHILD, circle a "2".

If you think that the statement is A LOT LIKE your CHILD, circle a "3".

DECISION MAKING QUESTIONNAIRE: MOTHER AND FATHER REPORT

Questionnaire Items:

1. Whether s/he does chores around the house.
2. When s/he has to do homework.
3. How much time s/he has to spend on homework each day.
4. What time s/he has to be home.
5. How s/he spends his/her own money.
6. What sorts of clothes s/he wears to school.
7. Which friends s/he spends time with.
8. What time s/he has to go to sleep on school nights.
9. How s/he spends his/her time after school.
10. Whether s/he has to let me know where s/he is when s/he goes out.
11. Whether s/he can have friends over when I/We aren't home.
12. Whether s/he has to go on family visits or outings.
13. What s/he can watch on television.
14. How much time s/he spends with his/her friends.
15. What clubs or hobbies s/he is involved with.
16. How s/he does his/her catheterization.
17. Whether s/he takes his/her pills.
18. How s/he does his/her bowel program.
19. What sorts of foods s/he eats.
20. How s/he puts on braces/splints or uses his/her wheelchair.
21. Whether s/he does his/her skin checks.
22. Whether s/he does his/her pressure releases.
23. How s/he does his/her ROM exercises.

Scoring: Parents are asked to choose one response for each item. Response items include: 1.) I tell my child exactly what to do; 2.) I/We and my child discuss this together, but I/We usually have the final say; 3.) I/We and my child discuss this together, but my child usually has the final

say; and, 4.) I leave this up to my child to decide. If a particular item is not something their family makes decisions about, they are requested to check the answer "Does not apply."

APPENDIX B
OBSERVATIONAL CODING MANUAL AND CODING SHEET

OBSERVATIONAL CODING MANUAL

PARENT PROCESS CODES

I. Prevention of Independent Behavior

a. Prevention of Exploratory Behavior. Exploratory behavior occurs in situations in which a child investigates solutions, or tries out different approaches when engaged in a task. This code refers to the degree to which the parent prevents the child from investigating or exploring solutions on their own. A parent scoring high on this code would not allow the child to speculate, guess, or search for strategies when engaged in a task. In addition, a parent scoring high on this code would prevent the child from engaging in activities/approaches the child clearly expresses an interest in. This item is manifested through only nonverbal behaviors. Thus, high scores would be given to parents displaying nonverbal attempts to prevent their child from exploring solutions and learning from their mistakes. EXAMPLE: Parent physically interrupts the child, for example, by a physical gesture or by taking puzzle/game pieces from the child in order to demonstrate an alternate solution.

5. **Almost Always.** Parent displays nonverbal behaviors to prevent child's exploratory behavior most of the time during the interaction task.

4. **Usually.** Parent usually displays nonverbal behaviors in order to prevent exploratory behavior but nevertheless allows the child to explore or search for strategies on a few occasions.

3. **Sometimes.** Parent sometimes prevents exploratory behaviors, but on some occasions also allows the child to explore.

2. **Rarely.** At some points during the interaction, the parent prevents child from engaging in exploratory behaviors, but for the most part, allows child to work through tasks and learn from mistakes.

1. **Never.** Parent never prevents exploratory behavior, allowing the child to speculate and explore when problem solving throughout the interaction.

b. Expression of Individual Views/Opinions. This code refers to the degree to which the parent allows the child to express individual views or opinions. Parent listens to and tolerates the child's responses, even when responses disagree with their own views/opinions. In addition, parents who score high on this code would allow the child to make decisions independently from parental responses. A parent scoring low on this code will discourage a child from expressing his/her own views by ignoring the child's views, or by being overly critical of the child's response, or in some other way rejecting or trivializing the child's contribution.

5. Almost Always. Parent always allows the child to voice his/her own opinions and views, giving the child time to respond during the interaction, and listening to their responses.

4. Usually. Parent typically gives the child time to express their own opinions, but on a few occasions does not allow the child to express individual views, either by speaking for the child (or in some other way not allowing the child to speak), not tolerating or accepting the child's views, or minimizing or criticizing the child's responses.

3. Sometimes. Parent sometimes allows child to express own views, but there are some instances where parent shows an unwillingness to allow child to express opinions.

2. Rarely. Parent is reluctant to allow child to speak their own views/opinions, and actively engages in behaviors which do not encourage the child to express views (speaks for child, does not tolerate or accept child's views, criticizes child's views, changes focus of views/opinions expressed by child, or thwarts ideas that are not in accord with the parents').

1. Never. Parent never gives the child opportunity to express views/opinions or does not ever tolerate expression of child's opinions/views.

NOTE: This code differs from the previous code (a. Prevention of Exploratory Behavior) in that this code refers to a parents' response to the child's verbal behavior. In contrast, the previous code refers to a parent's response to the child's nonverbal actions.

II. Excessive Contact

a. Excessive amounts of physical contact with the child. A parent scoring high on this code engages in excessive physical contact with the child, as evidenced by hand holding, kissing, or other gestures such as touching the child's arm or putting an arm around the child during the interactions. Excessive contact is defined as contact which is abundant, or without restraint, and appears to exceed what would be considered typical for the child's age or cultural group.

5. Very Often. Parent appears to make physical contact with the child in excessive amounts, throughout the interaction.

4. Frequently. Parent frequently, but not always, exhibits an excessive degree of physical contact with the child.

3. Some. This score suggests that on a few occasions the parent exhibits an excessive degree of physical contact towards the child. On a few occasions the parent makes physical contact, but some of the time also appears to keep to him/herself.

2. Little. Parent mostly refrains from exhibiting an excessive degree of physical contact with the child.

1. **Not at all.** There is no evidence of excessive physical contact between the parent and child. On no occasion during the interaction does the parent display behaviors associated with excessive physical contact.

III. Infantilization

a. Active catering to the child. This item refers to the degree to which either parent willingly succumbs to the child's verbal requests, or appears to anticipate the child's needs and acts to fulfill them without a request from the child. A parent scoring high on this scale appears to wait on the child hand and foot, or dotes on the child during interactions. This behavior is geared towards gratifying a child's desires. A parent who scores high on this code would be overly attentive to the child's needs, whether they are requested by the child or not. For example, during the Conflict task, a parent scoring high on this code would give in to demands which would not be tolerated by most parents (i.e., the child can eat whatever s/he wishes, sleep regardless of hours, etc.). During other tasks, this behavior might manifest itself in a parent who quickly says yes to a child's requests, or frequently checks on the child to make sure they are having fun, or asks if they need anything during the interaction.

5. Very Often. Parent appears to be extremely attentive to the child, and seeks to satisfy the child's needs and wants (requested or anticipated) throughout the task. The

parent dotes on the child, and appears overly concerned about the child's well-being.

4. Frequently. Parent frequently, but not always, is extremely attentive to the child's requests. Parent may honor all requests which are realistic, not attending only to those which are not able to be fulfilled.

3. Some. On a few occasions the parent appears to dote on the child, but displays this behavior inconsistently throughout the interaction.

2. Almost none or little. Parent does not seem to dote on the child. There is very little evidence that the parent is attempting to anticipate the child's needs. The parent may fulfill an occasional request from the child, however, this is the exception rather than the norm.

1. Not at all. There is no evidence of the parent excessively catering to the child. The parent does not exhibit this behavior at all during the interaction.

b. Behavior which infantilizes the child. This code refers to the degree to which either parent engages in physical or verbal behaviors which serve to "baby" the child, or seem exceedingly childish. Verbal examples include calling the child by a name which appears inappropriate for the child's age, or responses which seem condescending in a childlike way. Physical examples include patting the child on the head, or other gestures which do not seem age appropriate.

5. Almost Always. Parent displays verbal or nonverbal behaviors to "baby" the child throughout the interaction task.

4. Usually. Parent on several occasions displays verbal or nonverbal behaviors which seem to infantilize the child, but on a few occasions does not display this behavior, instead treating the child his/her own age.

3. Sometimes. Parent sometimes babies the child, but on a few occasions appears to treat the child his/her own age.

2. Rarely. At some points during the interaction, the parent appears to infantilize the child, but for the most part, interacts with the child in an age-appropriate manner.

1. Never. Parent on no occasion displays behavior which would be considered infantilizing towards the child.

IV. Control

a. Parent controls the child. This code describes a parent who attempts to dominate or control the child during the interaction tasks. High scores would be given to a parent who excessively interrupts the child or the other parent, invades a conversation between the child and the second parent, or in some other way (covertly or overtly) attempts to control the child during the interaction.

5. Very Often. Parent dominates or controls the child throughout the interaction, during simple conversation or periods of decision-making.

4. Frequently. Parent frequently, but not always, controls the child. Parent is excessively controlling during many parts of the interaction, but on occasion refrains from interrupting or controlling the child in order to allow the other parent or the child to express opinions/ solutions.

3. Some. On some occasions the parent appears to control the child, but only displays this behavior some of the time. The behavior is inconsistent throughout the interaction.

2. Almost none or little. Parent almost never controls or dominates the child, mostly allowing others to speak and tolerating their responses. The parent may attempt to control

the child on a few occasions during the interaction, however, this is the exception rather than the norm.

1. **Not at all.** The parent on no occasion attempts to control or dominate the child.

CHILD PROCESS CODES

a. Child engages in exploratory behavior. (NOTE: Code only for Warm-ups and Game Tasks, not Conflict) Exploratory behavior occurs in situations in which the child investigates or tries out different approaches when engaged in a task. This item refers to the degree to which the child displays this type of behavior. A child scoring high on this code would speculate, guess, or search for strategies when engaged in a task. This item is manifested through only nonverbal behaviors. Thus, high scores would be given to children displaying nonverbal attempts to explore solutions or learn from their mistakes. **EXAMPLE:** Child explores alternative solutions in a nonverbal way, such as by rearranging puzzle pieces, or appearing to concentrate and explore solutions silently in an attempt to determine an approach/strategy to the task.

5. Almost Always. During all interaction tasks, the child engages in nonverbal exploratory behaviors.

4. Usually. Child usually displays nonverbal behaviors which suggest exploration, however on a few occasions, does not exhibit this behavior.

3. Sometimes. Child sometimes engages in exploratory behaviors, but on some occasions also allows the parent to

actively problem solve for them, or appears to haphazardly or arbitrarily complete the task.

2. **Rarely.** At some points during the interaction, the child engages in exploratory behaviors, but for the most part, allows the parent to work through tasks, or appears unmotivated or indifferent while completing the tasks.

1. **Never.** The child never explores solutions when problem-solving.

b. Expression of Individual Views/Opinions. This code refers to the degree to which the child's responses are made independently from parental responses. A child scoring high on this code is self-reliant and confident when responding to the task demands. S/he responds freely and independently, without relying on parental verification or approval. In contrast, a child scoring low on this code is dependent on a parent for encouragement or support from a parent before responding.

5. Almost Always. The child always voices his/her own opinions and views during the interaction.

4. Usually. The child typically expresses his/her own opinions, but on a few occasions does not express individual views, either by looking to the parent for approval or support before responding, by allowing the parent to respond for him/her, or in some other way indicates that s/he is unwilling to express individual opinions.

3. Sometimes. Child sometimes expresses own views, but there are several instances in which child is unwilling to express individual opinions.

2. Rarely. Child is reluctant to speak their own views/opinions, and rarely expresses their own opinions. On most occasions, the child actively engages in behaviors which

replace the expression of individual views (allowing parent to speak for the child, agreeing with the parents' views).

1. **Never.** Child never expresses their own views/opinions.

NOTE: This code differs from the previous code (a. Child Engages in Exploratory Behavior) in that this code refers to a child's verbal behavior. In contrast, the previous code refers to the child's nonverbal behavior.

c. Child Neediness. This code refers to the degree to which the child demands parental attention. A child scoring high on this code is very needy of the parent's attention and care, and actively engages in behaviors designed to elicit attention, assistance or catering from a parent. A child scoring high on this scale is insistent that the parent wait on the child hand and foot, or would display behaviors which suggest that the child does not feel competent in completing a task without parental assistance. Behaviors eliciting attention from the parent can be either verbal or nonverbal. VERBAL: Child whines, complains or is manipulative in order to get attention or assistance from parent, or as a way to fulfill their demands. NONVERBAL: Child taps parent or physically intrudes at times when parent is not giving the child undivided attention.

5. Very Often. Child engages in behaviors designed to elicit parental attention throughout the task. The child appears to be needy, and does not display self-reliant behavior at any time during the task.

4. Frequently. Child frequently, but not always, appears needy and demanding of parents attention.

3. Some. On a few occasions the child appears needy, but displays this behavior inconsistently throughout the interaction.

2. Almost none or little. Child does not appear to be needy, mostly engaging in self-reliant behavior. There is very little evidence that the child is attempting to elicit parental attention to an excessive degree.

1. Not at all. There is no evidence of the child appearing needy. The child does not exhibit this behavior at all during the interaction.

d. Child Seeks an Excessive Amount of Physical Contact. This code refers to the degree to which child seeks an excessive degree of physical contact from the parent. A child scoring high on this code engages in excessive physical contact with the parent, as evidenced by hand holding, kissing, or other gestures such as touching the parent's arm or putting an arm around the parent during the interactions. An excessive amount of physical contact is defined as contact which is abundant, or without restraint, and appears to exceed what would be considered typical for the child's age or culture.

5. Very Often. Child appears to make physical contact with the parent in excessive amounts, throughout the interaction.

4. Frequently. Child frequently, but not always, exhibits an excessive amount of physical contact with the parent.

3. Some. This score suggests that on a few occasions the child exhibits an excessive degree of physical contact towards the parent, however, does so without consistency. On a few occasions the child makes physical contact, but some of the time also appears to keep to him/herself.

2. Little. Child mostly refrains from exhibiting an excessive degree of physical contact with the parent.

1. **Not at all.** There is no evidence of excessive physical contact between the parent and child. On no occasion during the interaction does the child display behaviors associated with excessive physical contact.

e. Child acts like a baby. This code refers to the degree to which child displays behaviors which seem exceedingly childish and inappropriate given the child's age. Examples include speaking in a childlike voice, or responding in a developmentally inappropriate way (such as with pretend crying), or by displaying other gestures which do not seem age appropriate.

5. Almost Always. Child acts like a baby throughout the interaction task, displaying behavior which does not seem age appropriate.

4. Usually. Child on several occasions displays behaviors which seem exceedingly childish, but on a few occasions does not display this behavior, instead acting his/her own age.

3. Sometimes. Child sometimes acts like a baby, but on some occasions appears to act his/her own age.

2. Rarely. At some points during the interaction, the child acts like a baby, but for the most part, interacts in an age-appropriate manner.

1. Never. Child on no occasion displays baby-like behavior which would be considered inappropriate for the his/her age.

CODING SHEET

SUBJECT NUMBER _____

TASK (Conflict, Game, Warm-ups) _____

PARENT PROCESS CODES

I. a. Prevention of Exploratory Behavior (Code only for Warm-ups and Game, not Conflict)

MOTHER:	5	4	3	2	1	
	Almost	Always	Usually	Sometimes	Rarely	Never

FATHER:	5	4	3	2	1	
	Almost	Always	Usually	Sometimes	Rarely	Never

b. Expression of Individual Views/Opinions.

MOTHER:	5	4	3	2	1	
	Almost	Always	Usually	Sometimes	Rarely	Never

FATHER:	5	4	3	2	1	
	Almost	Always	Usually	Sometimes	Rarely	Never

II. a. Excessive amounts of physical contact with the child.

MOTHER:	5	4	3	2	1
	Very Often	Frequently	Some	Little	Not at All

FATHER:	5	4	3	2	1
	Very Often	Frequently	Some	Little	Not at All

III. a. Active catering to the child.

MOTHER:	5	4	3	2	1
	Very Often	Frequently	Some	Little	Not at All

FATHER:	5	4	3	2	1
	Very Often	Frequently	Some	Little	Not at All

b. Behavior which infantilizes the child.

MOTHER: 5 4 3 2 1
 Almost Always Usually Sometimes Rarely Never

FATHER: 5 4 3 2 1
 Almost Always Usually Sometimes Rarely Never

IV. a. Parent controls the child.

MOTHER: 5 4 3 2 1
 Very Often Frequently Some Little Not at All

FATHER: 5 4 3 2 1
 Very Often Frequently Some Little Not at All

CHILD PROCESS CODES

a. Child engages in exploratory behavior. (Code only for Warm-ups and Game, not Conflict)

CHILD:	5	4	3	2	1	
	Almost	Always	Usually	Sometimes	Rarely	Never

b. Expression of Individual Views/Opinions.

CHILD:	5	4	3	2	1	
	Almost	Always	Usually	Sometimes	Rarely	Never

c. Child Neediness.

CHILD:	5	4	3	2	1
	Very Often	Frequently	Some	Little	Not at All

d. Child Seeks an Excessive Amount of Physical Contact.

CHILD:	5	4	3	2	1
	Very Often	Frequently	Some	Little	Not at All

e. Child acts like a baby.

CHILD:	5	4	3	2	1	
	Almost	Always	Usually	Sometimes	Rarely	Never

Additional questions..

1. Does the child display any evidence of an emotional disorder (anxiety, depression, or behavioral problems)?

1 = YES

2 = NO

If yes, how obvious was this in the video?

1 = Very Obvious

2 = Somewhat Obvious

3 = Not at all Obvious

2. Do you think that this child has spina bifida?

1 = YES

2 = NO

If yes, how obvious was this on the video?

1 = Very Obvious

2 = Somewhat Obvious

3 = Not at all Obvious

3. Rate this child's level of intelligence.

1 = Superior Intelligence

2 = Above Average Intelligence

3 = Average Intelligence

4 = Below Average Intelligence

4. Please rate how verbal this family was during the interaction (in general, based on mother, father and child responses).

1 = Very Verbal

2 = Somewhat Verbal

3 = Quiet

5. Please rate this child on how much s/he enjoyed the interaction tasks.

1 = Enjoyed the tasks very much

2 = Enjoyed the tasks somewhat

3 = Did not enjoy the tasks

6. Did you like this family?

1 = Yes

2 = No

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The author is a fourth year graduate student, pursuing a Ph. D. degree in Clinical Psychology with a subspecialty in Child and Family psychology from Loyola University of Chicago. Previous to her enrollment at Loyola University, Johnson attended the University of Illinois at Urbana-Champaign, where she obtained a B.F.A. in 1986.

Johnson's main research interests include pediatric psychology, chronic illness, and adolescence. Johnson worked as a research assistant from 1992 to 1994 on the study entitled, Family Relationships and Psychosocial Adjustment in Adolescents with Spina Bifida, from which the data for this thesis was drawn.

Johnson has published several articles on chronic illness, specifically in the area of research on Chronic Fatigue Syndrome. Johnson has worked on several projects aimed at identifying Chronic Fatigue Syndrome in adults. In one study, Johnson worked as a research assistant on a project assessing the prevalence of Chronic Fatigue Syndrome among nurses, comparing prevalence rates across several diagnostic criteria. In a subsequent study, the medical and psychological condition of those nurses meeting diagnostic criteria for Chronic Fatigue Syndrome was assessed.

In the area of children and adolescents, Johnson has researched the effectiveness of child psychotherapy, working on a grant funded by the William T. Grant Foundation.

In addition, Johnson has published several studies evaluating different strategies aimed at reducing the number of hours children watch television.

Together with Grayson N. Holmbeck, Ph.D., Johnson was awarded a grant from the American Association of Spinal Cord Injury Psychologists and Social Workers, entitled, "Family Relationships and Psychosocial Adjustment in Adolescents with Spinal Cord Injury." Johnson acts as Co-Principal Investigator on this project.

In 1996, Johnson was awarded a grant with

THESIS/DISSERTATION APPROVAL SHEET

The thesis submitted by Sharon Z. Johnson has been read and approved by the following committee:

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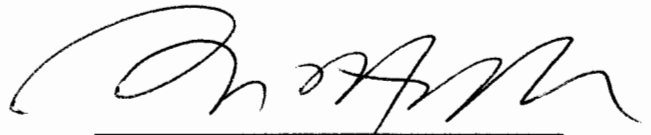
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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

4/3/97

Date



Director's Signature