RELATION BETWEEN INDICES OF BEHAVIORAL AND EMOTIONAL ADJUSTMENT AND SOCIAL DOMINANCE

by

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(Under the Direction of A. Michele Lease)

ABSTRACT

The focus of the present study was to determine the potential utility of using self-report social dominance measures as a means of indicating children's social status. The relations between self- and peer-ratings of social dominance and indicators of adjustment-related outcomes were examined. Peer-ratings of dominance demonstrated higher correlations with outcome measures, including self-rated problems with internal relationships, social-dissatisfaction, social self concept, and social stress, than did self-reported social dominance. Peer-rated dominance also was significantly related to peer-reported sadness and worry and behaviors such as leadership skills. Self-rated social dominance was not related to any indices of adjustment. Contrary to expectations, locus of control was not correlated with either self- or peer-reported dominance.

INDEX WORDS: Social Dominance, Peer Ratings, Self-Report, Adjustment

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DEDICATION

I would like to dedicate this thesis to my grandmother, Georgia Dix Law. She embodies all I strive to be: intelligent, strong, honest, and kind.

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CHAPTER 1: INTRODUCTION

Peer relationships have proven to play a fundamental role in the emotional and psychological well being of children. Children naturally vary in terms of their relationships with peers. That is, some children tend to have better relationships with peers than do other children. Positive peer relationships, such as friendships, are considered to help safeguard children against depressive and anxious problems; children with better peer relationships also tend to have fewer conduct-related misbehaviors including delinquency, drug use, and academic failure, (Parker, Rubin, Price, & DeRosier, 1995; Parker & Asher, 1987).

Within the sociometric literature, researchers typically categorize children based on social status, or how well-liked a child is by his or her peer group (Coie, Dodge, & Coppotelli, 1982). Peer-ratings of likeability generate two dimensions of social status: *Social impact* is based on the number of overall ratings received, whether negative or positive, and *social preference* is determined by subtracting negative nominations from positive nominations (Coie, et al., 1982). Five sociometric status groups are generated, partially based on the assessment of those two dimensions: popular, average, controversial, rejected, and neglected (Frederickson & Furnham, 1998).

A primary issue facing researchers is that inherent in this method of classification is the assumption that social status is based primarily on the extent to which a child is well-liked. However, the distinguishing feature of neglected status children is not their likeability but their lack of visibility in the peer group (Newcomb, Bukowski, & Pattee, (1993). Therefore, an

alternate method of classification should be considered when attempting to describe this subset of children.

This group of children may be better described by methods that assess level of social dominance within a peer group. Similarities between children classified via sociometric means as neglected and children identified as low dominant have been documented (Hawley, 1999; Lease, Musgrove, & Axelrod, 2002). In fact, dominance appears to better assess the factor that distinguishes this group of children from others.

This current study sought to determine if social dominance, as assessed by self- and peer-ratings, is associated with indices of behavioral and emotional adjustment. The two types of ratings were used due to findings that self- and peer-ratings may vary. Self- and peer-ratings of social dominance were hypothesized to be correlated with self-reported locus of control, teacher- and peer-rated self-confidence and leadership. Self- and peer-reported dominance would hypothesized to be positively correlated with each other. Further, self- and peer-rated social dominance were anticipated to be correlated with internalizing problems such related to anxiety and depression, though to a lesser degree, as well as externalizing problems, such as aggression.

CHAPTER 2: REVIEW OF THE LITERATURE

Learning to fit in with peers is an important developmental task for children in middle childhood (Bukowski & Hoza, 1989). Achieving this goal is not easy for all children, and the disadvantages associated with failure are well documented. Specifically, the initiation and maintenance of positive peer relationships has proven to be an accomplishment that affords psychologically healthy outcomes to those who master the task, whereas failure places children at risk for maladaptive outcomes, such as academic difficulties, delinquency, drug abuse, and a variety of mental health problems (Parker, Rubin, Price, & DeRosier, 1995; Parker & Asher, 1987).

There are those children who clearly approximate the prescribed notion of "fitting in" with their peers, whereas others are actively excluded from the peer group. However, not all children fall into one of these two discreet categories. For example, there are those who do not fit in with peers and yet are not actively excluded either. The question arises of how this latter subgroup of children fares in relation to others who clearly are accepted or not accepted at all. In addition, what are the perceptions of these children regarding their own status? The focus of this study is on those children who are overlooked, ignored, or neglected by their peers.

Sociometric Classification Methods

Sociometric classification methods have been the dominant tool used by developmental psychologists to classify children's social status in the context of the peer group (Coie, Dodge, & Coppotelli, 1982). Such methods group children according to how well they are liked or disliked by their peers. Thus, a major assumption of the sociometric process of classification is that fitting in with peers and achieving a healthy social status is based on how well liked a child is by

peers (Parkhurst & Hopmeyer, 1998). Specifically, peer nominations of children that are liked the most and those that are liked the least are used to determine social status. Like-most and like-least nominations are used to create two continuous variables: social preference, or relative likeability, and social impact (Coie, Dodge, & Coppelli, 1982). Social preference scores are determined by subtracting the number of like-least nominations from the number of like-most nominations that a child receives from peers; social impact scores, or visibility, are created by adding the number of like-most and like-least nominations a child receives (Bukowski, 1983). Whereas social preference is a summary measure of the degree to which a child is liked by peers, social impact assesses the degree to which a child engenders strong reactions from peers, whether it is strong liking of the child or strong dislike (Lease, Musgrove, & Axelrod, 2002). Social preference and social impact are considered to be the two dimensions underlying the construct of social status (Coie, Dodge, and Coppotelli, 1982).

Like-most, like-least, social preference and social impact scores are used in the sociometric method to classify children into one of five subtypes: popular, average, controversial, rejected, and neglected (Frederickson & Furnham, 1998). Average status serves as the origin of the two intersecting dimensions of sociometric status, social preference and social impact. Popular and rejected subgroups anchor the two extremes of the social preference dimension: Popular children receive many like-most nominations, few like-least nominations, and high social preference scores, whereas rejected children receive many like-least nominations, few like-most nominations, and low social preference scores. The two anchors of the social impact dimension are the neglected and controversial subtypes. Children classified as controversial receive many like-most and like-least nominations and high social impact scores. Regardless of the opinions of their peers, controversial children are noticed. Conversely,

neglected children receive few like-most and like-least nominations and have depressed scores on the social impact dimension (Bukowski & Hoza, 1989; Parker, et al., 1995); they are not noticed by their peers. In essence, neglected children are neither liked nor disliked within the peer group and their participation, or lack thereof, within the peer group seems to be of no consequence to others within the group. Thus, rather than their likeability among peers, neglected children have little noticeable impact on others within their peer group that differentiates them from others (Lease, et al., 2002).

The psychometric properties of the rejected and popular subtypes are well-documented, unlike those of the neglected and controversial subtypes. Whereas the popular and rejected subtypes exhibit reliability and validity, the two subtypes anchoring the social impact dimension, controversial and neglected, have poor validity or reliability (Frederickson & Furnham, 1998). For example, many of the children rated as neglected one year tend to shift to average status during subsequent years (Terry & Coi, 1991) or to cross over to rejected status during adolescence (Franzoi, *et al.*, 1994). In one study, only 11% of children identified as sociometrically neglected remained in that status group at a one-year follow up (Ollendick, 1991). Further, few behavioral characteristics that are demonstrated solely by neglected status children have been found (Rubin, *et al.*, 1998).

Characteristics associated with the neglected subtype vary across studies. Some studies have demonstrated that behavioral characteristics of the neglected subtype are distinct from other subtypes (Coie & Kupersmidt, 1983; Dodge, 1983). However, these differences are not found consistently across studies (Ollendick, Weist, Border, & Greene, 1992). For example, some studies have described those children classified in the neglected status group as socially withdrawn (Begin, 1986) and avoidant (Dodge, 1983) and young adults classified as

sociometrically neglected as more avoidant than popular or average peers (Eronen & Nurmi, 2001). Other studies have found no difference in patterns of social withdrawal between average and neglected status children (Coie & Dodge, 1988).

Likewise, specific social-emotional, psychological, and academic characteristics have been attributed to neglected status children in some studies but not others. Inconsistencies in levels of anxiety have been reported, with some studies finding anxiety equal to that of popular children and actually less than average children (Crick & Ladd, 1993). A similar trend was found in regard to measurement of loneliness. Some studies have illustrated increased levels of loneliness for children who have limited peer involvement when compared to peers with greater levels of involvement; others have found no differences in levels of reported loneliness (Hymel, Rubin, Rowden, & LeMare, 1990; Crick & Ladd, 1993; Demir & Tarhan, 2001). Neglected and average children have also been found to be similar on ratings of social dissatisfaction and academic performance (Rubin, et al., 1989; Parker, et al., 1995). In fact, Ollendick *et al.*, (1992) found neglected children to differ from popular or average only in their locus of control. Thus, neglected status children have demonstrated few consistent signs of maladaptive behaviors or feelings compared to average and popular children. This finding is puzzling considering the expectation of psychological maladjustment placed on neglected status children.

This inconsistency in behavioral characteristics and socio-emotional characteristics of the neglected status group across studies and lack of differentiation between neglected status and other sociometric groups is a major reason that Frederickson and Furnhan (1998) have concluded that the sociometric neglected status subgroup has poor psychometric characteristics. It could be the match between the conceptualization of the neglected child and the measures used to identify such a child that is to blame for the poor psychometric properties. Specifically, the

neglected status group is conceptualized as children who have a low impact on peers and low visibility in the peer group, yet with sociometric measures these children are classified on the basis of like-most and like-least measures, or likeability (Lease, Musgrove, and Axelrod, 2002). However, Newcomb *et al.* (1993) suggest that the fundamental distinction between neglected status and average status is lack of visibility relative to peers rather than likeability. Neglected status children are not disliked; they are simply not as well known within the peer group as other members (Newcomb *et al.*, 1993). This suggests that the social impact/visibility dimension of social status is in need of methodological, and perhaps conceptual, clarification as well. Specifically, since neglected status children are not dicriminable on the basis of likeability, classification of these children should not be based on like-most and like-least nominations.

Social Dominance

The study of social dominance has an extensive history with a continuous emphasis on behaviors that occur with the goal of gaining access to wanted and needed resources (Axelrod, 2000). Due to the inherent limited nature of resources, within group competition is a necessary event (Darwin, 1859). The roots of social dominance research began with the study of differences in primates' access to food and mates (Carpenter, 1942), which related to other processes including group defense and social group reorganization (Jolly, 1972; Furuya, 1960; Strayer & Strayer, 1980). Various definitions of social dominance since have been used when studying the construct. Some researchers equate dominance with a "pecking order" that children use as a pathway to obtain wanted or needed resources (Strayer & Strayer, 1980). A later definition proposed that dominance dictates that specific members of a group should receive more resources based upon a rank ordering of its members (Dunbar, 1988).

The approach taken by Hawley (1999) has been somewhat unique in that social dominance is defined by focusing on its function rather than its behavioral manifestation (e.g., aggression); that is, social dominance is a resource acquisition strategy. Social dominance is more explicitly defined as the product of dyadic competition between members of a group who vary in their ability or their motivation to acquire social and material resources (Hawley, 1999). Resources are the items that are external to the individual that are deemed necessary for survival, growth, and development (Hawley, 1999), many of which are social in nature. Specifically, cognitive stimulation, social relationships (Chapais, 1992), play partners (Cosaro, 1985), and attention from peers are social resources for which children compete, whereas toys are examples of material resources. When children are denied access to social resources, their social development is hampered (Bjorklund & Pelligrini, 2002). For example, children who do not engage in social activity do not have the same opportunities to develop social skills or leadership abilities as do those children who are more involved within the peer group.

Social Dominance Strategies

In the discussion of social dominance, Hawley (1999) does not emphasize the strategy used to obtain resources as integral to the definition; this lack of emphasis is due to the fact that children employ various strategies to acquire and control resources that change as children age. Children may use unfriendly or aggressive strategies during early childhood to secure resources (Abramovitch & Gursec, 1978). Although some children continue to employ aggressive means to acquire resources as they develop (Hawley, 2000), these agonistic strategies tend to be replaced with more prosocial means for some children by around third grade, which correlates with the time period in which aggressively dominant peers no longer reap the benefits that aggression once afforded (Hawley, 1999). That is, children begin to recognize the advantages of

prosocial efforts and frown upon simple force or aggression as a means of procuring resources within the peer group. They are also able to better assess the character of their peers (Hawley, 1999). Thus, over time methods of dominance change with children developing more prosocial strategies to acquire resources including reciprocation of good will and actions (Trivers, 1971), responding in kind to peers (Axelrod, 1984), and forming alliances with other children in the group (Chapais, 1992). Cooperation among members of the peer group allows for access to resources as well; children who are able to enlist the help of others are more capable of gaining access to resources that cannot be obtained by a single individual (Charlesworth, 1998). That is not to say that all children make the progression from aggressive tactics to prosocial means of obtaining resources within the group. Further, there are those children who do not rely solely on prosocial or aggressive means; some children use both prosocial and coercive strategies in their quest for dominance (Hawley, 1999). These changes in strategies over time are due to the cognitive growth of the child. Specifically, children begin to understand others over time and develop empathic responses, a sense of justice, role-taking abilities, and decline in egocentrism (Hawley, 1999), which would seem to lessen the acceptance of physical aggression to gain access to resources.

Cognitive development is not the only criterion that helps determine choice of dominance strategy; gender plays a role in choice of dominance strategy as well. Males and females alike use aggressive strategies during the toddler years. For those children who continue to use aggressive strategies, further distinctions begin to emerge in early childhood with males relying more on overtly aggressive strategies than females (Bjorklund & Pelligrini, 2002). Males generally use overt aggression in an effective and selective manner, akin to Machiavellian

techniques, that results in a relatively stable hierarchy of dominance (Bjorklund & Pelligrini, 2002).

In contrast, a number of females employ prosocial means of resource acquisition at the early childhood age (Bjorklund & Pelligrini, 2002). Further, females who aggress as a means of dominating peers tend to do so in a way that is distinct from their male peers. Specifically, females employ a relational form of aggression that secures resources through damage to or manipulation of their peer relationships (Cairns, Cairnes, Neckerman, Ferguson, & Gariepy, 1989; Crick & Werner, 1998). This may consist of ignoring or actively excluding specific peers (Crick & Grotpeter, 1995). It is hypothesized that girls employ relational versus overt aggressive strategies because it affords them a reliable and effective method of gaining control of the peer group and securing resources, such as friendships and status for the aggressor (Crick, Bigbee, & Howes, 1996), and effectively denies others resources such as closeness, acceptance, social experiences, and friendship (Crick, Casas, & Nelson, 2002).

Dominance Hierarchies

An individual's level of social dominance is often measured by his or her ranking within a group, termed a dominance hierarchy. Dominance hierarchies are naturally occurring and are based on an extensive history of dyadic competition between members of a peer-group (Bjorklund & Pelligrini, 2001); hierarchies can function as a way to differentiate individuals within the social context in which the peer group operates (Chase, 1984). Those children who are frequently successful in competition for resources are considered to be on the upper levels of the hierarchy, whereas those who are generally unsuccessful occupy the bottom rungs of the hierarchy (Bjorklund & Pelligrini, 2001), with those at the upper echelons as better able to fulfill their needs (Hawley, 1999). Dominance hierarchies are thought to operate linearly among all

members of the group (If child A dominates child B and child B dominates child C, then child A also should dominate child C) (Bjorklund & Pelligrini, 2001). They also demonstrate temporal stability (Bjorklund & Pelligrini, 2001; Savin-Williams, 1980).

The development of social dominance hierarchies can be used as a way for a group to maintain social order (Bjorklund & Pelligrini, 2001) in two ways. First, dominance hierarchies serve to reduce intragroup aggression and the personal cost of conflict by clearly identifying those who are higher and those who are lower on the hierarchy; this allows lower dominant individuals insight into who they can and cannot dominate (Strayer & Strayer, 1980; Hawley, 1999). This knowledge allows an individual to predict and circumvent adverse consequences that occur with unskilled attempts at social dominance, perhaps by way of aggression (Strayer & Strayer, 1980). A second role served by dominance hierarchies is that of creating cohesion within the group to secure resources that a single member of the group could not procure (Savin-Williams, 1979). In doing so, interpersonal relationships are fostered and benefits are reaped by all members of the group (Hawley, 1999). In sum, dominance hierarchies serve as a general guideline by which an individual can determine the likelihood of prevailing in interpersonal conflict with another member of the peer group (Hawley, 1999) as well as help maintain group cohesion.

Sociometric Neglect Redefined

Innate differences in the personalities and capabilities of children ensure that the competitive process will result in some individuals controlling more of the resources within the group than others control (Hawley, 1999). There are those children who naturally seek a leadership, resource-dominating role within the peer group. However, there are others who either are unwilling or are unable to dominate others, essentially relegating themselves to a lower

standing within the dominance hierarchy (Hawley, 1999). Conceptually, sociometrically neglected children seem to fit the description of a less-dominating type; they are described as being overlooked by peers, which is similar to Hawley's (1999) description of low dominant children (Lease, *et al.*, 2002). These children also have less impact in the peer group, suggesting that they lack influence and power that a child with more dominance would possess. Thus, low social dominance may be a better way of characterizing children who are overlooked and have a low impact on their peers than sociometric classification, which is based on likeability (Lease, *et al.*, 2002). This has shown to be especially true in cases of boys who lack the motivation or the ability to dominate others within the peer group, leaving them isolated from their peers (Adler & Adler, 1998).

Conceptual similarities abound between sociometrically neglected children and low dominant children (Lease *et al.*,2002). Although there are few behaviors that consistently discriminate neglected status children from their peers, several studies have shown that children classified as neglected tend to be less aggressive and less socially active than their peers (Newcomb, *et al.*, 1993; Begin, 1986). Peers of neglected children see them as shy or withdrawn (Frederickson & Furnham, 1998), as well as displaying fewer prosocial skills than average children (Parker, et al., 1995). One study found neglected status, albeit with young adults, to be associated with a generally passive and noninititating interaction style with peers, which suggests reduced motivation to acquire social resources within the group (Eronen & Nurmi, 2001).

Further, Lease *et al.* (in press) identified a cluster of Low Dominant/Unpopular children who seemed to exhibit behavior characteristics similar to those often attributed to the sociometrically neglected subtype. Specifically, Lease *et al.* (2002) clustered 489 children into seven groups on the basis of their peer rated likeability, perceived popularity, and social

dominance. Seven clusters were found, including a cluster of Low Dominant/Unpopular children. By relying on more than likeability as a basis for differentiating children, it seems that the characteristics associated with children in the Low Dominant/Unpopular group better described a child who is neglected by peers. Specifically, social withdrawal/social anxiety was seen as a distinctive trait of these children, especially in girls (Lease *et al.*, 2002). Low Dominant/Unpopular girls were also viewed as exceptionally emotionally sensitive (Lease, *et al.*, 2002). However, the cluster solution and results reported by Lease *et al.* (2002)have not been replicated.

A comparison of the sociometrically neglected group and the Low Dominant/Unpopular status group of Lease *et al.* (2002), showed that the two groups were related but not completely overlapping. Of those identified as neglected, 33.3% were also found to be Low Dominant/Unpopular; the remaining neglected children were classified in the Lease *et al.* solution as Average (39%), Disliked (10%) or Well Liked/Dominant (3%) (Lease *et al.*, 2002).

Outcomes Associated with Dominance Status

Whereas maladaptive outcomes are thought to be correlated with neglected sociometric status and low dominance, higher status children should demonstrate positive outcomes. If a person is accepted within a peer group, that child should feel competent and optimistic about future interactions, which would then serve as a solid foundation on which to build social skills and higher self esteem (Eronen & Nurmi, 2001). For instance, children who are higher in social status, whether it is measured by likeability or dominance, should be central among their peers. It has been shown that those children who gain many like-most sociometric nominations and few like-least nominations are considered prosocial, likeable, and academically inclined (Lease, *et al.*

2002). Those children with a larger social outlet also are less lonely and have more friendships (Parker & Asher, 1993).

Socially dominant individuals are those individuals who can manipulate and control the social order of their peer group, thus gaining desirable resources (Lease, *et al.*, 2002; Hawley, 1999). Therefore, it is expected that those who are socially dominant would receive valued resources including participation in more school activities, a greater number of friendships, a higher level of intimacy in relationships, and a greater number of opportunities to engage in activities with friends (Franzoi, *et al.*, 1994). It has generally been the view that if a child has few friends, then loneliness and dissatisfaction may ensue (Asher *et al.*, 1990).

In contrast, those who demonstrate lower levels of social dominance are not expected to acquire social resources, at least by their own efforts, that are gained by children who do have the ability and inclination to dominate others. Lacking sufficient social resources such as friendships, attention, and visibility in the peer group, low dominant children are more likely to have negative outcomes. One study found that peer-reported neglected girls have been found to be at a higher risk for depression (Kupersmidt & Patterson, 1991). Moreover, Lease and Musgrove (2003) found several indices of maladjustment for children who ranked low on measures of dominance. For example, poor leadership skills, school problems, and an elevated proportion falling in the at-risk category for anxiety problems were found for boys (Dix, Lease, & Foels, 2003).

However, the manner in which a child perceives his experience within the peer group may prove more indicative of later maladjustment than peer ratings of status (Boivin et al, 1994). For example, rejected-aggressive children often do not recognize that they are, in fact, rejected; consequently, they do not always manifest psychological difficulty that is generally associated

with peer rejection such as depression, loneliness, and social withdrawal (Newcomb, *et al.*, 1993). Perhaps lacking insight into their social standing safeguards such children from the emotional turmoil that may ensue at the realization of their low standing with peers (McDougall, Hymel, Vaillancourt, & Mercer, 2001; Boiven & Begin, 1989).

Similarly, low dominant children may not necessarily demonstrate higher rates of loneliness, depression, social withdrawal, and shyness if they have found an alternate route for obtaining resources, rather than by their own means. For example, Adler and Adler (1998) found that some children have been shown to be admitted into higher status cliques by having friends who are dominant among peers or by a perception that he or she would be someone worthy of association.

Current Study

In the current research, the goal was to examine the potential utility of a particular social dominance assessment method (Axelrod, 2000) to assess the construct of social dominance in children. Social dominance can be considered a continuous trait for all children. Some display more socially dominant behaviors beginning in early childhood and continuing throughout adolescence, whereas others tend to show less motivation or inclination to attain resources (Hawley, 1999). Thus, the present study chose to utilize a continuous measure of social dominance rather than placing children into discreet categories on the basis of their dominance. Self-reported dominance was assessed for each child; a correlational design was then utilized to assess the relation between self-reported low dominance and relevant social and psychological outcomes.

Children have shown the ability to report their own status within the peer group; the ability to recognize their status in relation to peers increases with age. For example, in a study

by Hymel and colleagues (1990), second grade students were able to judge their own social competence; these judgments were positively related to peer-rated perceptions of social competence and negatively related to peer-rated isolation three years later. By adolescence, those children labeled as popular by their peers accurately perceive themselves as popular as well (Franzoi, *et al.*, 1994). Some exceptions exist, but poor insight into their standing among peers seems to be a problem primarily for rejected-aggressive children, in the sociometric literature, who have been shown to overestimate their social skills and competence (Ladd, 1999).

Although the focus of this study was on level of self-reported dominance in relation to a number of adjustment outcomes, peer- report of social dominance was also assessed as peer- and self-reported status have been shown to differ (e.g., self- and peer-report for rejected status children). Peers are important sources of information regarding children's status among peers during middle childhood and provide reliable and valid data that predicts outcomes in other children. Peer judgments may yield such rich information because peers are in closer contact with each other across an array of situations within a variety of relationships (e.g., classmates, lunch, playmates, birthday parties, studying companions) (Rubin, Bukowski, & Parker, 1998). It was expected that peer-report and self-report of dominance for low dominant children would be correlated. For example, Kamphaus, DiStephano, and Lease (2003) found that peers were able to differentiate between self-reported types of child behavior profiles better than either parents or teachers.

The focus of this study was to examine the relation between children's peer- and self-reported social dominance scores and peer-, teacher-, and self-reported behavioral and emotional adjustment indices. Specifically, it was anticipated that self- and peer-reported levels of dominance would be positively correlated with a self-reported internal locus of control, or the

feeling that one can control his or her environment and one's own successes and failures, and self-reported leadership skills; locus of control and leadership appear to be directly related to the construct of dominance.

Low dominant children lack the motivation or ability to acquire social resources (Hawley, 1999), one of which may be the opportunity to build friendships. Therefore, it was hypothesized that self-reported interpersonal relations, social self-concept, social self-esteem would be positively correlated with self- and peer-rated dominance, whereas social stress and social dissatisfaction would be negatively correlated with self- and peer-rated dominance. Again, friendships have been shown to be related to such indicators of status such as social dominance (Chapais, 1992; Cosaro, 1985).

Self- and peer-reported dominance were expected to correlate positively, though to a lesser degree, with self-reported anxiety and depression, as these constructs are further removed from the construct of dominance in that other constructs could mediate or moderate the relation between dominance and such internalizing difficulties. Likewise, self-reported self-esteem was hypothesized to demonstrate a weak to moderate correlation with self- and peer-rated dominance. That is, children who cannot or will not acquire resources may develop a negative self-view as a result; however, a child may have friends who are more dominant than she/he, and, therefore, she/he is able to obtain resources even though she/he does not procure them via their own dominance efforts

Peer-reported behavioral nominations for leadership ("This person gets chosen as a leader") and self-confidence ("This is a person who seems to have a lot of self confidence") were anticipated to be positively correlated with self- and peer-reported dominance. Weaker positive correlations were expected between peer-rated worry ("This person worries a lot and is scared of

lots of things"), depression ("This person often seems sad or unhappy"), and social insecurity ("This person gets their feelings hurt easily")

Teacher-report of behavioral characteristics was hypothesized to have the weakest correlations with peer- and self-rated dominance of the three measures of behavior (e.g., self-, peer-, and teacher-report). However, of teacher-rated scales, leadership was hypothesized to be positively correlated with higher ratings of self- and peer-reported dominance. A correlation between aggression and social dominance ratings was anticipated as well. As indicated previously, children tend to employ various strategies when seeking resources, some of which may be aggression (Hawley, 1999).

CHAPTER 3: METHOD

Participants

A total of 487 students in fourth through sixth grades were recruited from three rural elementary schools in the southeast region of the United States to participate in this study. Participants ranged in age from 9 to 13 years, 51.3% of which were girls. Across the sample, 58.1% were White, 39.3 were Black, and 2.7% were Asian, Hispanic, or of Mixed ethnicity. Each classroom was a self-contained regular education classroom and ranged in size from 18 to 28 students.

Procedure

Participants were recruited and data collected during the spring of the 2000 academic year. Parental consent forms were sent home with places to sign for both granting consent and denying consent. Consent was obtained for 85% of possible participants (516 of 606 students); only the names of those students with consent to participate were included on the peer nomination measures.

Measures

Forced Choice Social Dominance. Using the method of Axelrod (2000), which builds on Hawley's idea that dominance manifests itself in dyadic interchanges (1999), paired comparisons were utilized to determine a child's social dominance. Specifically, children were presented with all possible dyads of same-sex classmates and were asked to circle the name of the one of the two who exhibited "more power and influence" (i.e., 'Some kids have influence and power over other kids – they get others to do what they want'). Only same-sex dyads were used in the procedure due to the finding that cross-gender nominations tend to be biased toward males

(Axelrod, 2000); children completed the measure only for classmates of their own gender. Peer-rated dominance was calculated based on the total number of times a child was chosen by peers as the dominant member of a dyad. The number of choices that each child received was summed and standardized within classroom and gender to a mean of 0 and a standard deviation of 1. To calculate self-rated social dominance, the total number of times that a child chose himself or herself as the dominant member of a dyad was divided by the total number of times that his or her name appeared in a dyad.

Peer Nominations of Behavior. Children were asked to nominate classmates that fulfilled specific characteristics associated with the advantages of social status, using instructions similar to those from the Revised Class Play (Masten *et al.*, 1985). Specifically, children were instructed as follows: "Pretend that you are assigning roles in the upcoming class play. We would like for you to nominate three children who fit each role as listed below. You can nominate a person for more than one role" (Masten *et al.*, 1985).

Participating children nominated three children in their class that they felt best met the descriptions listed. Peer-report of the following characteristics, as described previously, were used to examine potential differences between self- and peer-reported perceptions of dominance due to the perceived relation with social dominance: (a) Feelings hurt easily; (b) sad or unhappy; (c) worries/easily scared; and (d) self-confidence. Further descriptors used in the assessment included (a) influence ("others listen to; this person has a lot of influence"), (b) admiration ("others in class admire this person; they want to be around this person and be like him/her"); (c) cool ("really cool; just about everybody in school knows this person"); (d) leadership ("gets chosen by the others as the leader; others like to have this person around"), and (e) social control ("has a lot of control; they decide who gets to be in the popular groups or 'in crowd'"). The

number of times a child was nominated for each description was summed and standardized with a mean of 0 and a standard deviation of 1 within classroom and gender due to the greater likelihood of same-sex nominations and given that numbers of possible nominations vary across classrooms, depending upon class size. Previous studies have indicated behavioral nominations by peers produce scores with high split half reliabilities (Perry, Kusel, & Perry, 1988) and high test-retest reliabilities (Coie & Dodge, 1983).

Self-Report of Social-Emotional Adjustment. Children were asked to complete the Behavior Assessment Scale for Children-Self Report of Personality (BASC-SRP) (Reynolds & Kamphaus, 1992) in order to assess the individual child's view of his or her own behavioral and emotional functioning. Internal consistencies of the individual scales on the BASC-SRP range from about .70 to .89, with a mean of .8 (Reynolds & Kamphaus, 1992). Specifically, self-reported T-scores on selected scales of the BASC-SRP were used to determine the extent of potential relationship with dominance ratings: Anxiety, Depression, Interpersonal Relations, Locus of Control, Self Esteem, Social Relations, Social Stress, and Sense of Inadequacy.

Participants completed items from the Loneliness and Social Dissatisfaction Scale (Asher & Wheeler, 1985), which are related to loneliness, level of adequacy and competency within social settings, estimated status among peers, and perceptions of whether or not social needs are met. Several "filler" items were included to promote truthfulness. Cronbach's alpha, calculated for a 16-item version of the scale, was demonstrated to be .90 (Asher, Parkhurst, Hymel, and Williams, 1990). Results from the DuBois social self-concept and social self-esteem scales (DuBois, *et al.*, 1996) are reported as well. The scale assesses a child's self-regard and perception of social adequacy. Results were standardized within classroom and gender to a mean of 0 and a standard deviation of 1.

Teacher-rated Behavioral Characteristics. To determine whether low dominance was associated with negative behavioral or emotionally-related symptoms as viewed by teachers, scales were taken from the Behavioral Assessment Schedule for Children- Teacher Report Form (BASC-TRS) that pertain to internalizing difficulties or criteria hypothesized previously to be related to social dominance. Teacher-reported T-scores on the following scales were used: Anxiety, Depression, Withdrawal Leadership, and Aggression. Reliability of scales on the BASC-TRS has been demonstrated to be high, with an average $\alpha = .8$ across all age ranges and genders (Reynolds & Kamphaus, 1992). The BASC manual reports individual subscale coefficients that range from .76 to .94 (Reynolds & Kamphaus, 1992).

CHAPTER 4: RESULTS

Correlations were computed to assess the relation between self- and peer-reported dominance and perceptions of behavioral characteristics and emotional functioning as rated by self, peers, and teachers.

The results are presented in two parts. In the first section, results are reported in regard to the correlational analysis between ratings of dominance and measures of leadership, locus of control, and internalizing behaviors for the participants of the study as a whole. Second, possible differences between males and females were of interest; therefore, the second set of results presents findings for males and females separately. Due to the number of correlations calculated and subsequent increase in the rate of detecting false positive correlations, only correlations that yielded a p value >.001 and produced an $r \geq .25$ were considered to be of practical or clinical significance.

Overall, the correlational analysis involving all members of the sample (See Table 1) showed that peer-reported dominance was more highly correlated with self-, peer-, and teacher-ratings of behavior than was self-rated dominance. Peer-reported dominance was significantly related to a poorer self-rated social self-concept as well as peer-rated behaviors. Specifically, those children that peers rated as low in dominance were also considered to have their "feelings hurt easily" and to be low in both leadership and self-confidence. Those children who were rated as low in dominance were also rated as "sad/unhappy" and "worried/scared" by peers. Teacher ratings of the behavioral characteristics of withdrawal and leadership were significantly related to peer-rated

Table 1. Correlations between Reported Dominance and Leadership, Locus of Control, and Internalizing Difficulties

	Peer-Reported Dominance		**Self-Reported Dominance**	
	corr	**p value**	**corr**	**p value**
Self-Ratings				
Locus of Control	-.095	.037	.039	.413
Interpersonal Relationships	.234	<.0001	.107	.022
Social Self Concept	.297	<.0001	.183	<.0001
Social Dissatisfaction	-.238	<.0001	-.162	<.0001
Social Stress	-.193	<.0001	-.045	.343
Self Esteem	.035	.444	.055	.241
Anxiety	-.125	.006	-.058	.221
Depression	-.174	.0001	-.008	.863
Peer-Ratings				
“Feelings hurt easily”	-.338	<.0001	-.166	<.0001
“Sad/Unhappy”	-.423	<.0001	-.238	<.0001
“Worried/Scared”	-.411	<.0001	-.242	<.0001
“Leadership”	.503	<.0001	.210	<.0001
“Self-confident”	.315	<.0001	.108	.019
Teacher-Ratings				
Leadership	.293	<.0001	.063	.188
Withdrawal	-.367	<.0001	-.098	.042
Depression	-.167	.0003	-.037	.445
Anxiety	-.149	.0013	-.115	.017
Aggression	.094	.0443	.155	.001

dominance scores. However, self-rated dominance was not significantly associated with any of the outcome measures assessed.

When separated by gender, the separate samples demonstrated similar patterns of significance (See Table 2). For males, peer rated dominance was significantly associated with less satisfaction with interpersonal relationships, a lower social self-concept, and all peer ratings of behavior other than self-confidence. Teacher ratings were not significantly related to peer-rated dominance. Self-rated dominance for males was not significantly associated with any emotional or behavioral outcomes.

Peer-reported dominance for females was significantly related to peer ratings of "feelings hurt easily," "sad/unhappy," and "worried/scared." Peer-rated dominance for females was also associated with teacher-rated withdrawal. However, self-perceived dominance for females was not significantly related to any outcomes measures.

Table 2. Correlations between Reports of Dominance and Leadership, Locus of Control, and Internalizing Difficulites by Gender

	Peer-Report (M)		**Self-Report (M)**		**Peer-Report (F)**		**Self-Report (F)**	
	corr	**p value**	**corr**	**p value**	**corr**	**p value**	**corr**	**p value**
Self-Ratings								
Locus of Control	-.089	.178	.048	.470	-.102	.110	.020	.760
Interpersonal Relationships	.279	<.0001	.091	.168	.195	.002	.131	.050
Social Self Concept	.306	<.0001	.247	.0002	.299	<.0001	.156	.019
Social Dissatisfaction	-.199	.002	-.203	.002	-.278	<.0001	-.153	.021
Social Stress	-.232	.003	-.023	.726	-.160	.012	-.052	.441
Social Self Esteem	-.086	.190	.093	.159	-.013	.834	.019	.773
Anxiety	-.097	.145	-.008	.908	-.150	.019	-.082	.224
Depression	-.227	.0005	.019	.779	-.126	.049	-.042	.535
Peer-Ratings								
“Feelings hurt easily”	-.332	<.0001	-.085	.211	-.380	<.0001	-.188	.004
“Sad/Unhappy”	-.354	<.0001	-.244	.0002	-.450	<.0001	-.211	.001
“Worried/Scared”	-.492	<.0001	-.246	.0002	-.382	<.0001	-.212	.001
“Leadership”	.503	<.0001	.264	<.0001	.502	<.0001	.167	.011
“Self-confident”	.222	<.0001	.115	.080	.406	<.0001	.146	.027
Teacher-Ratings								
Leadership	.287	<.0001	.124	.067	.314	<.0001	.077	.260
Withdrawal	-.260	<.0001	-.037	.585	-.484	<.0001	-.194	.004
Depression	-.202	.0025	-.054	.430	-.130	.044	-.061	.370
Anxiety	-.095	.156	-.129	.059	-.197	.002	-.112	.098
Aggression	.086	.199	.124	.067	.111	.086	.142	.036

CHAPTER 5: DISCUSSION

The present study sought to determine the potential utility of measures of social dominance as methods to assess children who vary on level of social visibility and impact in the peer group during middle to late childhood. A lower level of social dominance was considered to be a possible indicator of adjustment difficulties in middle childhood, as low levels of social dominance might be indicative of social difficulties as well as subsequent internalizing problems. Those children with low levels of dominance do not have as much access to social and material resources. For example, those low in social dominance as rated by self and peers may exhibit an external locus of control, poor leadership skills, social difficulties, and, though more removed, internalizing difficulties such as anxiety and depression. Correlational analyses were conducted using both peer- and self-rated dominance compared with adjustment-related outcome measures.

The results of the study indicate that self-reported social dominance was not significantly related to emotional and behavioral outcome measures of anxiety, depression, social withdrawal, leadership, or locus of control. Peer-report of social dominance, however, provided more information. Specifically, peer-rated social dominance was related to a lower social self-concept for males and teacher-rated social withdrawal for females. Peer-rated dominance was significantly related to peer-perceptions of behavior as well; however, the correlation is likely due, in part, to the fact that peers were the raters in each instance.

Several broad conclusions can be drawn from the results of the study. First, the measure of self-reported dominance used does not appear to be a sensitive method for measuring social dominance in the peer group. Children who are more socially dominant have more opportunities to acquire resources such as participation in a greater number school activities, more friendships,

more intimate relationships, and a greater number of social interaction opportunities, which should serve to promote emotional and behavioral health (Franzoi, et al., 1994; Asher, et al., 1990). Therefore, when a child lacks social dominance and the resources that social dominance affords, he or she should not be as emotionally and behaviorally healthy as those who are more socially dominant. However, in the current study, self-ratings of dominance were generally unrelated to outcome measures of emotional and behavioral functioning including depression, anxiety, social stress, leadership, and withdrawal. This finding suggests that the measure of self-report utilized in the current study, or perhaps self-report in general, is less sensitive than peer-report in assessing social status variables, such as level of dominance in a peer group, as well as the outcomes of level of dominance.

Second, an additional explanation for the lack of correlation between behavioral and emotional adjustment indices and peer- and self-rated social dominance could be that children have other ways of acquiring social resources, which compensates for their lack of effort or ability to acquire resources on their own. That is, children may be able to acquire resources by other methods than their own dominance assertions, which would lead to more positive behavioral and emotional outcomes than those predicted in the current study. For example, children who are lower in social dominance but have more highly dominant friends may acquire resources by proxy that are not available to those who do not have such friendships. Thus, they are not lacking social resources that, when unavailable, are thought to facilitate negative outcomes. Perhaps more complex models are needed that would incorporate moderators of the relation between dominance and adjustment variables such as number of friendships, various levels of friendship quality, and temperament of the child among other factors that were not

assessed in this study to better understand the relation between social dominance and emotional and behavioral health.

Third, social dominance, as assessed in this study, may be not related to the outcome measures chosen for methodological reasons. First, the self-rated outcome measures place an emphasis on educational elements of outcomes that may not be related to the social construct of social dominance. The BASC-SRP and BASC-TRS are school focused. For example, Locus of Control as assessed by the BASC-SRP stresses control of external events within a school setting. For example, contributing to the scale is a statements suggesting that others are to blame for earning poor grades. The BASC-TRS is designed to assess behaviors in the classroom, many of which are related to scholastic performance. For example, teacher-rated leadership assesses skills associated with accomplishing academic goals as well those related to the community or social endeavors (Reynolds & Kamphaus, 1992).

In addition, the methods used to assess social dominance may be better used to categorize children into discrete groups and compare them as such, which was the method used by Lease and colleagues (2002). This study did not seek to categorize children into groups. Rather, social dominance was considered to be a trait that is continuous in nature with children having degrees or levels of the trait (e.g., higher, lower).

With future research, it may prove more useful to establish cut-off scores in relation to dominance measures in order to categorize children into groups of high and low dominance, for example. Thereafter, comparisons between groups can be made to assess whether greater or fewer internalizing or externalizing symptoms vary in accordance with level of dominance. Possibly, there is a certain level of social dominance that, once reached, allows a child sufficient access to resources that would buffer him or her from potential adjustment problems. Thereafter,

greater increases in degrees of social dominance may do little to improve upon his or her position or ability to gain resources in the peer group and thus provide no more barrier against maladaptive outcomes.

While the present study is a first step in determining the relation between self-reported social dominance and outcome measures of adjustment and emotional functioning, there are limitations that should be discussed. Specifically, the use of a correlational approach does not shed light on the direction of influence. Therefore, it is unclear which construct occurred first (e.g. a poor social self concept or lower social dominance in the peer group), or if the two are even causally related. As suggested previously, the use of the BASC may prove to be an inappropriate assessment tool to estimate outcomes associated with a construct more social that academic in nature. The generalizabilty of the study is rather limited, as the participants were members of rural, northeast Georgia schools.

In order to improve upon the study, a more through approach to understanding the relation between social dominance and emotional and behavioral outcomes is recommended. For example, a study design that incorporated types and quality of friendship as well as temperament of the children as potential moderators of the relation between social dominance and emotional and behavioral adjustment indices may be better able to explain the relation.

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