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FEATURE

GIFTED ADOLESCENTS AND THE "BALANCED FAMILY" CONCEPT

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ABSTRACT

ABSTRACT: Do factors in the family environment facilitate or impede adaptive coping responses in family members? Some theorists have warned that in some cases, relationships with parents may become a source of stress and conflict for adolescents. While the regulation of relational space within the family has long been a core issue of family process theory, in perhaps no other theoretical model does it hold such a central position as in the Circumplex Model of family functioning. The Family Adaptability and Cohesion Evaluation Scales (FACES) III, used in this study, is an instrument based on the Circumplex Model. FACES III was developed by Olson, Portner and Lavee, to provide a measure of family cohesion and adaptability. The purpose of the present study was to explore the relationship between family cohesion within the gifted sector of the adolescent population. The results show that an adolescent originating from a highly cohesive family may be able to draw upon a supportive family unit as an effective coping response.

RELEVANT LITERATURE

The family is a fundamental constituent of society. Far from being a static and inert component, however, the family unit operates as a dynamic entity, interacting with its environment while mediating internal processes. Such vitality has led an influential group of family theorists to consider the family from a systemic perspective. Indeed, the resultant family systems theory has served as the foundation of important developments in family therapy and the guiding force for a respectable body of published research regarding the family (Rosenblatt, 1994).

Family Systems Theory

A system may be conceptualized as an entity formed from connected elements operating in predictable and recurrent patterns (Boulding, 1985). A defining characteristic of a dynamic, living system is its ability to maintain a selectively permeable boundary between its internal elements and its surrounding environment (Broderick, 1993; Schultz, 1984). The permeability of the systemic boundary regulates potential interchange and access in either direction across the boundary (Brown

& Christensen, 1986). A system is considered functional if it provides simultaneously for a clear organic integrity and adequate levels of contextual exchange (Nichols & Schwartz, 1991).

Internally, systemic entities and subsystems are also defined by boundaries—invisible barriers that regulate the amount of contact with other entities within the system (Constantine, 1986; Nichols & Schwartz, 1991). Such boundaries must be strong enough to permit an entity to perform its tasks, but not so closed as to preclude effective communication and interchange with the rest of the system (Schultz, 1984). If the boundary is too strong, the entity is considered to be disengaged; if too weak and diffuse, the entity is described as enmeshed in the rest of the system. The degree, then, to which boundaries are maintained or are bridged contributes toward inner systemic processes of distance regulation (Broderick, 1993).

Broderick (1993, p. 37) notes that the family is a prime "example of an open, ongoing, goal-seeking, self-regulating social system." The metaphor of family boundaries has also found its place as a central tenet in family systems thinking (Ryder & Bartle, 1991). Serving to protect separateness and autonomy, these interpersonal boundaries surround both the family unit as a whole, as well as the individuals and subsystems within the family system (Nichols & Schwartz, 1991). Family boundaries, however, must remain selectively permeable. While it is true that a family system survives only to the extent that it successfully defends the integrity of its borders, it is equally imperative that the family provides for essential transactions across these same boundaries in order to ensure optimal functioning for the individual family members (Broderick, 1993).

The Structural Approach to Family Systems Theory

While the numerous proponents of family systems theory have much in common, their published works present such great diversity that it would be misleading to suggest that there is but a single family systems theory (Merkel & Searight, 1992). Indeed, Rosenblatt (1994) has proposed that one reason for this diversity of perspective regarding family systems is that the metaphors employed originate from many different sources. The family system, for example, has been depicted alternately as a stage play, a machine, a competitive game, and a multibodied biological organism. One of the more influential conceptions, however, has built upon the metaphor of a family structure, highlighting the systemic arrangement of family members in terms of boundaries, roles, and interaction and attachment patterns (Brown & Cristensen, 1986; Constantine, 1986; Nichols & Schwartz, 1991).

The emergence of structural family therapy in the 1970s, and its subsequent predominance as a systemic theory, came about, not only due to its methodological effectiveness, but also as a result of the virtuosity of its principal exponent, Salvador Minuchin (Brown & Christensen, 1986; Rosenblatt, 1994; Schultz, 1984). Proceeding from a clinical background at the Wiltwyck School—a residential institution for delinquent boys from New York City, Minuchin (1974) and his colleagues began to describe the family as a system formulated to establish mutual interlock, coalitions, and the intergenerational carryover of motifs and figures without necessitating either written or voiced agreement. Family systems, in turn, were portrayed as having an underlying organizational structure representative of the interactional and transactional patterns established among the family members. Such structure would frequently involve the formation of internal subsystems, such as the executive subsystem or the sibling subsystem, based upon characteristics such as sex, age, or interest (Minuchin, 1974; Piercy & Sprenkle, 1986).

The boundaries of either a family system or subsystem are "the rules of who participates and how" (Minuchin, 1974, p. 53). These family rules derive from the culture and from the family's cumulative experience. Because rules differ from family to family, each family's boundaries may

well vary in terms of their flexibility and permeability (Piercy & Sprenkle, 1986). In some families, for example, boundaries may be extremely rigid, making it difficult for the members to adjust to new situations. In other families, boundaries may be so highly amorphous and diffuse that stability is sacrificed and internal patterns obliterated. A functional family structure is held to concurrently evidence both clear and flexible boundaries. Conversely, a dysfunctional family is one in which boundaries are poorly defined and/or inflexible (Minuchin, Montalvo, Guerney, Rosman, & Schumer, 1967).

In terms of permeability, a family system is considered functional if it provides for both connectedness and separateness, for both bridges and buffers between its individual members (Nichols & Schwartz, 1991). Overly restrictive boundaries permit little contact with other systems or subsystems, resulting in isolation and disengagement. Highly permeable, non-selective boundaries, however, may result in the loss of systemic identity. The balance of these competing functions of support and autonomy is a perpetual family quest and compromise (Brown & Christensen, 1986), with individual family members not always agreeing among themselves as to the type of boundaries found in their families or as to where these boundaries should be drawn (Demo, Small, & Savin-Williams, 1987; Olson, 1986; Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983; Pharand, Sudermann, & Peters, 1988; Portner, 1982; Rosenblatt, 1994).

Family Structure and Member Coping

Family systems theorists have postulated links between family contingencies and the coping responses of family members. Minuchin (1974), for example, while noting that significant stressors can arise from extrafamilial sources, proposed that stressors originating from within the family may likewise demand resourceful coping responses. He observed that family-based stressors can become especially poignant when the family is faced with idiosyncratic problems—such as an exceptional child in the family, and at transitional points in the life cycle—such as when a child enters adolescence. If the family fails to satisfactorily negotiate these stressful episodes, the development and functioning of individuals in the family may be impaired (Bowen, 1978; Madanes, 1983).

Factors in the family environment have been held to either facilitate or impede adaptive coping responses in family members. Some theorists, for example, maintain that the family context yields many positive contributions to adolescent development and adjustment (e.g., Grotevant & Cooper, 1985; Shulman & Klein, 1982). Boss (1986), for example, contends that adaptive adolescent functioning is truly achieved in concert with stable relationships and family integration. Nevertheless, other theorists (e.g., Montemayor, 1983; Steinberg, 1987) have cautioned that in some cases and at certain stages, relationships with parents may, in fact, become a source of stress and conflict for the adolescent.

In any event, family theory seems to hold forth, almost as a foundational premise, the tenet that the individual behavior of family members is strongly related to family transaction and structure (Millington, 1994). Thus, family characteristics such as adaptability, communication style, family harmony, and satisfaction with family life may directly affect the coping strategies of family members, and in so doing, mediate the level of individual and family stress. Theoretical constructs which have been proposed as facilitative of adaptive coping include the concepts of family modeling, family support systems, and balance within the family environment.

Shulman, Seiffge-Krenke, and Samet (1987) propose that the family context often serves as a guide or model for adolescent functioning, with the adolescent's coping style assuming a strong

relationship to his or her perception of family climate. A perceived climate wherein cohesion and individuality are jointly emphasized, for example, may serve as a model for personal coping responses when the adolescent is faced with external and/or developmental tasks. Based on the family model, such an individual experiences a sense of personal empowerment while recognizing the value of support systems. Additionally, in an adaptive family climate that appropriately perceives and responds to the external world, the family unit may also serve as a model for functional, flexible adolescent coping. A family type, however, that is perceived as unsupportive or inflexible is a model that will create but greater stress for the adolescent, impeding the development of functional coping and psychosocial competence.

In terms of support systems, family adaptability and cohesion have been perceived as family resources that play a vital role in the effective management of stress (McCubbin & McCubbin, 1987). Various theorists have proposed models in which parental support serves as a buffer against adolescent stressors (e.g., Rice, Herman, & Petersen, 1993; Shulman, 1993). Similarly, Millington (1994), in formulating a model of adolescent coping, identified family cohesion, in the form of a family support network, as a significant coping resource. The adaptability dimension of family functioning was seen to define the scope of permissible change attempts, relating thus to the adolescent's flexibility to consider alternate coping strategies.

While the structural perspective has proved to be a valuable theoretical approach for understanding the family, highlighting systematic arrangements and interactions, one would be remiss not to note its limitations. Specifically, the structural metaphor has been criticized for obscuring the tenuous, context-specific, ever-changing nature of family relationships in its quest for underlying patterns (Rosenblatt, 1994). Furthermore, limitations are inherent in the subjective/perspectival nature of the assertions about family structure, in the impossibility of directly observing much of what is considered to constitute family structure, and in the reality that family structures are never finalized but are rather constantly evolving. Accepting these limitations, the structural approach to family theory continues, nevertheless, to enrich and inform our understanding of family systems and of the individuals who make up these families.

The Circumplex Model of Family unctioning

While the regulation of relational space within the family has long been a core issue of family process theory (Hess & Handel, 1959; Kanton & Lehr, 1975; Sprey, 1979), in perhaps no other theoretical model does it hold such a central position as in the Circumplex Model of family functioning (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983). This structural model incorporates three dimensions of family behavior that emerged from a conceptual clustering of over 50 constructs previously developed to describe family dynamics. The three resultant dimensions were family cohesion, adaptability and communication (Olson & Lavee, 1989).

Family cohesion refers to "the degree to which an individual [is] separated from or connected to his family system" (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983, p. 48). It speaks to the emotional bonding that family members have toward one another, and to the family's ability to function together as a unit. Specific indicators utilized to diagnose family cohesion include family boundaries, coalitions, friends, time and space, decision making, emotional bonding, and interests and recreation. The Circumplex Model delineates four levels of cohesion, ranging from disengaged (very low), through separated (low to moderate) and connected (moderate to high), to enmeshed (very high). The central levels—separated and connected—are hypothesized to be the most favorable for family functioning, while the extremes of disengagement or enmeshment are

generally seen as problematic.

In an enmeshed family system, for example, there may be an overidentification of family members with one another, to the extent that loyalty and consensus within the family prevent individuation of family members (Nichols & Schwartz, 1991). Although often experiencing a heightened sense of mutual support, individuals in such a family system are so tightly locked and intertwined that independence and autonomy are impossible. Under these fused conditions, family members may assume a vigilante role, monitoring one another too closely; individuals may come to the point of requiring a certain relationship with another family member in order to maintain an identity; differences of opinion may be taboo; and family members may rely exclusively upon one another in order to determine what to do, feel, or believe. As a result, children from an enmeshed family may have trouble relating to people outside the family, may not be comfortable when by themselves, and may seem paralyzed in a decision-making situation until prompted by their parents. In essence, these enmeshed families are characterized by blurred, diffuse boundaries between individuals and between family subsystems.

At the other extreme, in a disengaged and highly autonomous family system, family members each go their separate ways with little commitment or attachment to the family, oblivious of or indifferent to the effects of their actions upon each other (Nichols & Schwartz, 1991). On the positive side, this situation permits independence and growth. Children, for example, are forced to develop personal resources when their parents cease to hover over them, fighting their battles and prescribing their course of action. Nevertheless, disengagement also limits warmth, nurturance, and affection; and unconnected parents may be slow to recognize that a child needs guidance or advocacy. As a result, children may be neglected, adolescents may feel unwanted, and even adults may lack the support needed for effective functioning. Such disengaged families, then, are structurally characterized by many buffers, and but few boundary bridges.

Within the central region of the cohesion dimension, however, individuals are able to experience the balance of being independent from and yet connected to their family (Piercy & Sprenkle, 1986). Here, boundaries are clear enough to protect the autonomy of individuals and subsystems, and yet permeable enough to insure mutual affection and support (Nichols & Schwartz, 1991). There is also a reasonable degree of physical and emotional interpersonal distance (Rosenblatt, 1994).

In the Circumplex Model, family adaptability focuses on the degree to which the family system is flexible and able to change its power structure, feedback loops, roles, and rules in response to developmental or environmental conditions (Olson & Lavee, 1989). This capability is essential, especially when considering the pervasiveness of pressures for family change and adaptation (Gottfried & Gottfried, 1994; Wetzel, 1990). Factors employed to measure and describe the dimension of adaptability include negotiation styles, role relationships and their corresponding rules, and concerns over family power—including such constructs as discipline, leadership, control patterns, and assertiveness. In a manner similar to that employed in the case of family cohesion, the adaptability dimension is segmented into four levels. The levels of adaptability range from rigid (very low), through structured (low to moderate) and flexible (moderate to high), to chaotic (very high). Likewise, the model posits that family systems need a balance of stability and change, and that the mid-range levels contribute most positively toward healthy family functioning.

The third dimension, that of family communication, is considered to be a facilitating construct (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983). As such, it enables families to negotiate movement on the dimensions of family cohesion and adaptability. Positive communication skills include reflective listening, supportive comments, and empathy. Negative communication processes include double messages, double binds, and criticism. These latter conditions inhibit the ability of

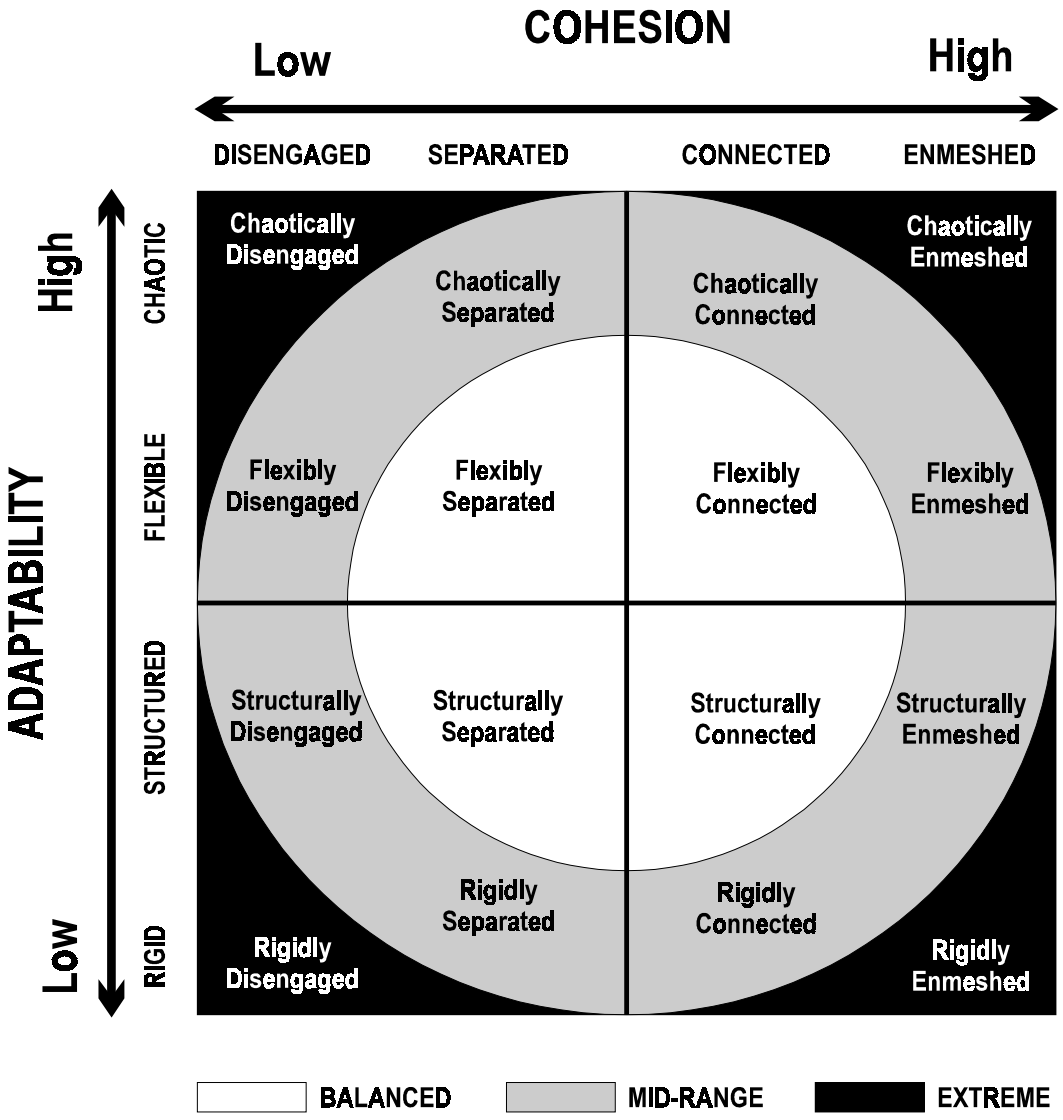

Figure 1. The Circumplex Model of Family Functioning

family members to share their feelings and thus move concertedly on the primary dimensions of family cohesion and adaptability.

Graphically (see Figure 1), the Circumplex Model depicts the continua of cohesion and adaptability positioned at right angles to one another, thus representing their orthogonal relationship of theoretical independence (Olson, Portner, & Lavee, 1985). The intersection of the four levels of each dimension forms 16 possible family subtypes. The circular concentric shapes—hence the name of the Circumplex Model—reflect three principal categories of family subtypes. The innermost category is that of balanced families, incorporating the four subtypes which have moderate scores

on both the cohesion and adaptability dimensions. The midrange category is composed of the eight family subtypes that are extreme on one dimension, but moderate on the other. The outermost category is that of extreme families, composed of the four family subtypes which are extreme on both dimensions. Although a vital component of the theoretical model, and a basic concept in family systems theory (Bowen, 1978; Weakland, 1967), the dimension of family communication does not appear on the figural representation of the model. This, however, is not an omission, but is due to the fact that family communication is considered to be an overarching facilitator of both family cohesion and adaptability.

It should also be observed that the Circumplex Model draws upon the notions of symmetry and equilibrium, delineating the risks of an extreme form of family life and, by contrast, the benefits of a balanced family system. Indeed, the model proposes that a moderate degree of family cohesion and adaptability is the most conducive to optimal family functioning and individual development. For each dimension, the extreme levels are viewed as problematic over time, even to the point of family pathology (Olson, Sprenkle, & Russell, 1979; Olson, Russell, & Sprenkle, 1980). Particularly, at these extremes, adolescent coping is believed to become dysfunctional, with ensuing psychosocial maladaption impairing normal development (Wrubel, Benner, & Lazarus, 1981).

Quite a number of family theorists seem to concur with this conceptualization of balance within the family in relationship to coping responses. Shulman and Klein (1982), for example, maintain that the balanced dialectics of individuality and closeness are central to a correct estimation of adolescent development, and contribute toward a better understanding of adolescent coping. Similarly, other theorists have proposed that one of the most important ways in which the family creates an environment supportive of the adolescent's successful transition into adulthood is via the degree to which parents help their offspring balance their need for individuality with their need to remain emotionally connected to the family, thus facilitating an age-appropriate balance of individuality and intimacy, of separateness and connectedness (Allison & Sabatelli, 1988; Carter & McGoldrick, 1980; Gavazzi & Sabatelli, 1990). By contrast, poorly differentiated families are held to regulate distance in extreme ways, thereby presenting family members with the dilemma of having to sacrifice individuality for the sake of belongingness or belongingness at the expense of individuality (Aponte & VanDeusen, 1981; Stierlin, 1981). Such extremes, in time, are believed to interfere with the adolescent's personal development and coping effectiveness across a variety of emotional, cognitive, and behavioral dimensions (Boszormenyi-Nagy & Krasner, 1987; Shulman, Seiffge-Krenke, & Samet, 1987).

Although of considerable account to an understanding of family structure and process, the Circumplex Model has been critiqued on theoretical grounds (Rosenblatt, 1994). It has been held to obscure internal diversity within the family system and mechanisms by which a family might be simultaneously located in a dimension at one point in one regard and at yet another in other matters. Furthermore, it is possible that families may actually prefer to function in what might typically be considered to be pathological extremes, functioning in fact quite well in that manner. It is at this point, of course, that one must examine theory in the light of empirical evidence.

Empirical Evidence

Based on the Circumplex Model, an instrument has been developed which seeks to provide a measure of family cohesion and adaptability. This instrument, the *Family Adaptability and Cohesion Evaluation Scales III* (Olson, Portner, & Lavee, 1985), has become quite widely utilized in family research and clinical practice (Rosenblatt, 1994). Originally, the developers proposed two general

hypotheses related to family functioning: (1) For each dimension, moderate levels are most viable for healthy family functioning. (2) For each dimension, the extreme levels are generally perceived as dysfunctional to the family system (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1985). Such premises, of course, imply a curvilinear relationship between family cohesion and adaptability, and healthy family functioning. Initially these hypotheses received a certain amount of clinical support in families with adolescents, with the most dysfunctional families evidencing extreme structure in terms of cohesion and/or adaptability (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983). The investigators thus concluded, in the case of families with adolescents, that family systems functioned best in the balanced central area.

Other studies, however, have found support for a linear, rather than curvilinear relationship. In a study of adolescent depression, for example, Stewart (1992) utilized quadratic polynomial regression procedures to examine the linearity of family cohesion and adaptability. Results failed to support the curvilinear hypothesis. Similarly, a study of 2,440 males found no supporting evidence for a curvilinear relationship (Green, Harris, Forte, & Robinson, 1991). In this study, a direct linear relationship was evidenced between measures of individual well-being and family cohesion, while no relationship was found between well-being and family adaptability. Other studies have likewise reported linear as opposed to curvilinear relationships in the case of family cohesion and/or family adaptability (Eckblad, 1993; Hendershot, 1989; Kitchens, 1991; Pratt, 1990).

In a parallel vein, a recent study designed to specifically test the model did not find support for the curvilinear hypothesis (Perosa & Perosa, 1993). While the results of canonical analyses suggested that clear boundaries and the resolution of conflict in the family are indeed associated with positive coping strategies and mediate between family structure and identity achievement, findings also indicated—contrary to the emphasis in the model on a balance between enmeshment and disengagement—that young adults who coped positively and were identity achieved tended to describe their families as highly enmeshed. Specifically, individuals who reported that their homes were characterized by a strong sense of cohesion responded to stressors by turning to family members for support and by confronting their problems, rather than acting recklessly or relying on drugs or alcohol. Furthermore, both family cohesion and flexibility were found to correlate positively with the coping strategy of investing in family relationships, and negatively with confrontation avoidance and withdrawal. Based upon this evidence, the investigators concluded that high levels of family cohesion should not necessarily be equated with parental overinvolvement or with parent/ child fusion.

A study of academic coping in high school students (grades seven through twelve) likewise examined the linearity vs. curvilinearity of the Circumplex Model (Millington, 1994). The hypothesis that students from families who scored within the balanced region on cohesion and adaptability would score better in terms of utilization of adaptive coping strategies was not supported. In terms of family cohesion, students from "enmeshed" families employed active coping as opposed to avoidance coping in a more positive ratio than did students from balanced families. No difference, however, was found in coping patterns between students from balanced vs. extreme families on the family adaptability scale. It should be noted, however, that family cohesion and adaptability in this study were measured from the parental perspective. Millington recommended that future research might examine the relationship between the students' perceptions of family functioning and personal coping skills, speculating that these perceptions of family functioning might be more highly correlated with the adolescent coping patterns.

Additional studies provide corroborating evidence for the relationship of high levels of family cohesion, and in some cases adaptability, with effective coping strategies (Edwards, 1991; Gary &

Gary, 1986; Johnson, 1983; McCubbin, Needle, & Wilson, 1985; Marotz-Baden & Colvin, 1989; Sharpe & Brown, 1994). In a study of children coping with divorce, for example, family cohesion explained linearly a significant portion of the variance in problematic coping responses, such as withdrawal and anxious behavior (Johnson, 1983). Regression models, however, did not provide support for the moderate vs. extreme levels of cohesion and adaptability which had been hypothesized in the Circumplex Model. Similarly, a study of unemployed blue-collar families with adolescents indicated that family levels of cohesion and adaptability are related to adaptive coping strategies in a linear, rather than curvilinear fashion (Marotz-Baden & Colvin, 1989). In a study of children with sickle cell syndrome, 15% of the variance in engagement coping was linearly predicted by the level of family adaptability, while controlling for socioeconomic status and maternal psychopathology (Sharpe & Brown, 1994). Even Barnes and Olson (1985), who were instrumental in the development of the Circumplex Model, have reported that adolescents with high communication scores—a facilitating family dimension and allied construct of adolescent coping patterns—were more likely to come from families extremely high in terms of cohesion and adaptability than from balanced families.

While a few studies provide some evidence supporting the construct of balance in the family structure (e.g., Dunn, 1986; McCubbin & Patterson, 1981; Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983; Thomas & Olson, 1993), it should be noted that the samples employed, almost without exception, were derived from clinical or pathological populations. In nonclinical contexts, however, the concept of optimal coping patterns at the midrange of the cohesion and adaptability dimensions does not seem to garner adequate support. Indeed, Rosenblatt (1994) has suggested that part of this discrepancy may be due to the fact that much of the initial supporting literature was based on clinical cases. It may be the case that many nonclinical families with seemingly extreme levels of cohesion and/or adaptability are quite satisfied and may, in fact, function well in terms of personal criteria, and perhaps even by the standards of many family therapists. The developers of the FACES-III instrument, in fact, contemplated this possibility in observing that family cohesion appeared to relate linearly to optimal family functioning in nonclinical families. Although believing that this situation could be due to the possibility that nonclinical families represent only a narrow spectrum on either family dimension, they proposed, nevertheless, an alternative hypothesis: "Extreme types will function well as long as all family members like it that way" (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1985, p. 13). According to this alternative explanation, diverse family patterns can then be viewed as variant rather than as necessarily dysfunctional (Pharand, Sudermann, & Peters, 1988). This circumvents a value judgment call, and allows other factors, such as personal satisfaction and coping styles to intervene.

Based then upon this review of the literature, there seems to be a solid body of evidence that links family dimensions of cohesion and adaptability with adolescent coping patterns. The relationship for nonclinical populations, however, seems to be linear, rather than curvilinear (e.g., Johnson, 1983; Millington, 1994; Perosa & Perosa, 1993). The premise of family balance, at least as measured by the FACES-III instrument, seems to lack convincing empirical support. High levels of family cohesion and adaptability appear to favor adolescent utilization of at least certain types of functional coping strategies. It seems reasonable to believe that this relationship might also hold true for gifted adolescents.

PURPOSE OF THE STUDY

Although a number of investigators had explored the relationship between family cohesion/adaptability and adolescent coping in general (e.g., Asada, 1987; Gavazzi, Anderson, & Sabatelli, 1993; Shiran, 1994; Shulman, Seiffge-Krenke, & Samet, 1987), this potential relationship had not been examined within the gifted sector of the adolescent population. Due to the lack of empirical evidence directly addressing this issue in gifted adolescents, it seemed appropriate and necessary to approach the matter from a research perspective.

In view of the fact that theory (e.g., Minuchin, 1974; Olson, Portner, & Lavee, 1985; Shulman, Seiffge-Krenke, & Samet, 1987) and allied research suggested that there could be a relationship between family structure and adolescent coping patterns, this study addressed directly the nature of that relationship. Specifically, it posed the question: Do family cohesion/adaptability and gifted adolescent coping strategies relate in a linear rather than curvilinear manner? Founded upon the synthesis of themes and issues emanating from the literature, it was postulated that family cohesion and adaptability would evidence linear rather than curvilinear relationships with gifted adolescent coping strategies.

The purpose of this research, then, was to clarify whether or not progressively higher levels of family cohesion and/or adaptability would relate to more effective coping patterns in gifted adolescents. On one hand, the possibility existed that extreme levels of these family dimensions might react adversely upon adolescent coping responses. On the other hand, however, it might be the case that functional coping responses would be increasingly enhanced by heightened family cohesion and/or adaptability. Conflicting evidence, in this regard, had been found in research which focused on other populations (e.g., Dunn, 1986; Millington, 1994; Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983; Perosa & Perosa, 1993).

POPULATION AND SAMPLE

In statistical terms, the population for the study was composed of those gifted adolescents between the ages of 10 and 16 who attended the Summer Enrichment Program at the University of Virginia during 1994. In logical terms, however, the population for this study may be seen to encompass academically gifted adolescents at large in the 10 through 16 age bracket, to the extent that these individuals are similar to those sampled in this study.

The sample for the study (N=457) consisted of students in rising 6th through 10th grades who had been identified as academically gifted. These students were participants involved in the second and third sessions of a three-week residential summer program for gifted students at the University of Virginia. Assurance of confidentiality was given to the adolescent participants of the study, and parents signed a consent form granting permission for their child to participate in the study.

The participants for this summer program were selected competitively on the basis of four student essays, teacher recommendations, and standardized achievement and/or IQ test scores. Ratings of student essays, scored by two independent raters, endeavor to identify able and motivated students, who were highly articulate, descriptive, creative, and insightful. In terms of standardized achievement scores, participants had placed at a median 96th percentile in Vocabulary (N=409), 95th percentile in Reading Comprehension (N=422), 97th percentile in Math Concepts (N=407), 96th percentile in Math Problems (N=399), and 97th percentile on the Composite score (N=360). On intelligence tests, participants had attained a mean General IQ score of 131.62 (N=161; SD=17.14).

Among participants, the program endeavors to maintain a gender balance and minority ethnic representation in proportion to the applications received to the program. The sample, in fact, was quite evenly divided between male (50.2%) and female (49.8%) gifted adolescents. Respondent age ranged from 10 to 16 years, with an average age of 12.52 (SD=1.32). Students were distributed quite evenly in terms of grade level, with somewhat higher percentages in grades six (21.6%), seven (27.0%), and eight (21.3%), than in grades nine (18.2%) and ten (11.9%).

Indication of race or ethnic group membership was optional, and only 62.1% of the sample chose to provide this information. Of this group, 80.0% designated their ethnicity as Caucasian, 10.5% as Black, 7.7% as Asian, and 1.8% as Hispanic.

In terms of socioeconomic-related constructs, 55.3% of the families reported annual incomes of $90,000 or greater. Of participant fathers, 68.6% had received a graduate or professional degree. Comparably, of participant mothers, 50.0% had obtained a graduate or professional degree.

RESEARCH METHODOLOGY

Instrumentation for the study included the *Family Adaptability and Cohesion Evaluation Scales III* (Olson, Portner, & Lavee, 1985) and the *Adolescent Coping Scale* (Frydenberg & Lewis, 1993). Family cohesion and adaptability were measured with the FACES-III instrument. Adolescent coping strategies were measured utilizing the ACS. Pertinent demographic data were obtained via questionnaire. Data were collected from the gifted adolescents while they were in residence at the summer enrichment program. A packet containing a letter explaining the purpose of the study, a pencil, instrumentation, and corresponding instructions was delivered to each participant, and time was provided for response. All instrumentation was then collected and data were entered into a computerized database, with verification for accuracy.

For each variable in the study, appropriate statistics of central tendency and variability were calculated. In order to provide a measure of the internal consistency of the FACES-III and ACS instruments when utilized with a gifted adolescent population, Cronback's alpha coefficients were derived for instrument scales.

An alpha level of .05 was set globally for hypothesis testing. In order to maintain a consistent setwise alpha level, a Bonferroni alpha adjustment procedure was employed to account for multiple tests. In order to establish whether the relationship between family cohesion/adaptability and adolescent coping strategies was linear as opposed to curvilinear, trend analysis via polynomial curve fitting was employed. Specifically, quadratic polynomial regression was utilized to determine whether a second degree equation explained a significantly greater proportion of the variance in adolescent coping than did a first degree equation.

RESEARCH FINDINGS

Of the 457 gifted adolescents which originally formed the sample for this study, 420 individuals responded to the FACES-III instrument, 389 responded to the ACS instrument, and 380 responded to both research instruments. Consequently, in the case of the full instrumentation, a response rate of 83.15% was attained.

Cronbach's alpha reliability coefficients for the FACES-III scales were .75 for the Adaptability scale and .83 for the Cohesion scale. For the normative population, the reported reliability index of the Adaptability scale was .62, while that of the Cohesion scale was .77 (Olson, Portner, & Lavee, 1985). When utilized with this sample of gifted adolescents, the FACES-III instrument thus appears

to yield similar levels of internal consistency as had been reported for the normative population.

For the sample of gifted adolescents, alpha coefficients for the ACS scales ranged from .50 to .89, with a median reliability of .69 (see Table 1). These figures compare very closely with those obtained during instrument development with a more general adolescent population (Frydenberg & Lewis, 1993), thus suggesting that the ACS represents an internally consistent instrument when used with gifted adolescents.

Table 1
Comparison of ACS Alpha Coefficients for Gifted and Norming Samples

ACS Scales	Gifted Sample	Norming Sample
Focus on the Positive	0.70	0.68
Focus on Solving the Problem	0.66	0.72
Ignore the Problem	0.73	0.68
Invest in Close Friends	0.75	0.74
Keep to Self	0.76	0.70
Not Coping	0.55	0.58
Physical Recreation	0.59	0.64
Seek to Belong	0.61	0.67
Seek Spiritual Support	0.89	0.85
Seek Relaxing Diversions	0.50	0.54
Seek Social Support	0.77	0.80
Seek Professional Help	0.74	0.84
Self-Blame	0.75	0.76
Social Action	0.79	0.70
Tension Reduction	0.64	0.69
Wishful Thinking	0.68	0.67
Work Hard and Achieve	0.69	0.68
Worry	0.73	0.73
Median	0.69	0.70

The hypothesis that a quadratic equation involving family cohesion or adaptability would not explain a greater proportion of the variance in gifted adolescent coping strategy than would a linear equation was tested using polynomial curve fitting. Given a total of 36 comparisons, an alpha level of 0.0014 was employed to establish the significance of the results of individual tests.

Quadratic equations, on the average, were found to explain only an additional .5% of the variance in coping strategy in the case of Cohesion. In terms of Adaptability, quadratic equations explained an average of .2% of the variance in coping strategy beyond that accounted for by a linear equation. In no case did a quadratic regression equation explain a significantly greater proportion of variance in a coping strategy than did a linear equation (see Table 2 & Table 3).

Table 2
Change Introduced by the Family Cohesion
Quadratic Polynomial Equation

ACS Scales	R Linear	R Quadratic	R2 Change	F Change	P Change
Seek Relaxing Diversions	0.07	0.16	0.02	6.91	0.009
Seek Social Support	0.37	0.39	0.01	6.20	0.013
Work Hard and Achieve	0.29	0.31	0.01	5.09	0.025
Invest in Close Friends	0.05	0.13	0.01	4.99	0.026
Focus on Solving the Problem	0.34	0.35	0.01	4.70	0.031
Seek Spiritual Support	0.22	0.24	0.01	3.53	0.061
Physical Recreation	0.20	0.23	0.01	3.18	0.052
Focus on the Positive	0.31	0.32	0.01	2.45	0.118
Wishful Thinking	0.04	0.08	0.00	1.72	0.190
Ignore the Problem	0.12	0.13	0.00	0.96	0.327
Self-Blame	0.05	0.06	0.00	0.37	0.546
Seek Professional Help	0.18	0.18	0.00	0.33	0.566
Tension Reduction	0.10	0.10	0.00	0.31	0.581
Keep to Self	0.17	0.17	0.00	0.28	0.594
Seek to Belong	0.12	0.12	0.00	0.27	0.603
Worry	0.04	0.04	0.00	0.10	0.754
Social Action	0.16	0.16	0.00	0.05	0.819
Not Coping	0.13	0.13	0.00	0.04	0.838

α =0.0500/36=0.0014

Table 3
Change Introduced by the Family Adaptability
Quadratic Polynomial Equation

ACS Scales	R Linear	R Quadratic	R2 Change	F Change	P Change
Tension Reduction	0.09	0.12	0.01	2.29	0.131
Focus on Solving the Problem	0.17	0.19	0.01	2.28	0.132
Worry	0.01	0.08	0.01	1.96	0.162
Seek Professional Help	0.16	0.18	0.01	1.79	0.181
Ignore the Problem	0.02	0.07	0.00	1.67	0.197
Seek Relaxing Diversions	0.03	0.07	0.00	1.53	0.217
Not Coping	0.01	0.04	0.00	0.60	0.438
Seek Social Support	0.16	0.16	0.00	0.34	0.588
Physical Recreation	0.12	0.12	0.00	0.28	0.598
Self-Blame	0.06	0.07	0.00	0.27	0.602
Focus on the Positive	0.18	0.18	0.00	0.27	0.605
Invest in Close Friends	0.08	0.08	0.00	0.26	0.609
Keep to Self	0.06	0.06	0.00	0.17	0.685
Social Action	0.26	0.26	0.00	0.12	0.724
Seek Spiritual Support	0.05	0.05	0.00	0.08	0.773
Seek to Belong	0.06	0.06	0.00	0.07	0.796
Wishful Thinking	0.03	0.03	0.00	0.04	0.845
Work Hard and Achieve	0.04	0.04	0.00	0.03	0.861

α =0.0500/36=0.0014

Consequently, based upon this empirical evidence encountered in the study, it seemed evident that the relationship between family cohesion/adaptability and gifted adolescent coping strategies was not curvilinear. If a relationship existed, it appeared to be the more viable position to believe that it would be linear. Such linearity was in fact evident.

Pearson product-moment correlations involving family cohesion or adaptability were calculated for each of the coping strategies. Overall, family cohesion was found to relate linearly to 9 of the 18 adolescent coping strategies, and family adaptability related significantly to five of the strategies. Proportion of variance explained ranged from 3 to 14% (see Table 4 and Table 5).

Table 4
Relationship between Family Cohesion
and Gifted Adolescent Coping Strategies

ACS Scales	Cohesion		
	r	r^2	p
Seek Social Support	0.37*	0.14	0.000
Focus on Solving the Problem	0.34*	0.11	0.000
Focus on the Positive	0.31*	0.10	0.000
Work Hard and Achieve	0.29*	0.09	0.000
Seek Spiritual Support	0.22*	0.05	0.000
Physical Recreation	0.20*	0.04	0.000
Seek Professional Help	0.18*	0.03	0.000
Keep to Self	-0.17*	0.03	0.000
Social Action	0.16*	0.03	0.001
Not Coping	-0.13	0.02	0.008
Seek to Belong	0.12	0.01	0.012
Ignore the Problem	-0.12	0.01	0.012
Tension Reduction	-0.10	0.01	0.032
Seek Relaxing Diversions	0.07	0.01	0.085
Self-Blame	-0.05	0.00	0.176
Invest in Close Friends	0.05	0.00	0.176
Wishful Thinking	0.04	0.00	0.222
Worry	0.04	0.00	0.252

*p<.0014 (α =0.0500/136=0.0014; one-tailed p values)

Table 5
Relationship between Family Adaptability and Gifted Adolescent Coping Strategies

ACS Scales	Adaptability		
	r	r^2	p
Social Action	0.26*	0.07	0.000
Focus on the Positive	0.18*	0.03	0.000
Focus on Solving the Problem	0.17*	0.03	0.000
Seek Professional Help	0.16*	0.03	0.001
Seek Social Support	0.16*	0.03	0.001
Physical Recreation	0.12	0.01	0.012
Tension Reduction	0.09	0.01	0.051
Invest in Close Friends	0.08	0.01	0.078
Keep to Self	-0.06	0.00	0.131
Self-Blame	-0.06	0.00	0.133
Seek to Belong	0.06	0.00	0.133
Seek Spiritual Support	0.05	0.00	0.167
Work Hard and Achieve	0.04	0.00	0.215
Wishful Thinking	-0.03	0.00	0.271
Seek Relaxing Diversions	0.03	0.00	0.314
Ignore the Problem	-0.02	0.00	0.364
Worry	0.01	0.00	0.396
Not Coping	-0.01	0.00	0.435

*p<.0014 (α =0.0500/36=0.0014; one-tailed p values)

DISCUSSION

In essence, relationships between family cohesion/adaptability and gifted adolescent coping strategies were found to be linear rather than curvilinear. With increasing levels of family cohesion and/or adaptability, adolescent utilization of functional coping responses increased, while usage of dysfunctional coping modalities declined. In terms of family cohesion, this was specifically the case for the following coping strategies: Seek Social Support, Focus on Solving the Problem, Focus on the Positive, Work Hard and Achieve, Seek Spiritual Support, Physical Recreation, Seek Professional Help, Keep to Self, and Social Action. For family adaptability, linear relationships were found with the following coping strategies: Social Action, Focus on the Positive, Focus on Solving the Problem, Seek Professional Help, and Seek Social Support.

Hence, the results of this study did not bear out the curvilinearity of the relationship between family cohesion/adaptability and adolescent coping strategies. The tenet originally proposed by the

developers of FACES-III (Olson, Portner, & Lavee, 1985) and the Circumplex Model of family functioning (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983)—that a moderate degree of family cohesion and adaptability is the most conducive to individual development, while extreme levels in either direction are viewed as problematic over time (Olson, Sprenkle, & Russell, 1979; Olson, Russell, & Sprenkle, 1980)—failed to find support.

This, in fact, is consistent with non-clinical research studies. While some empirical support for the "balanced family" concept has been found in certain clinical samples (e.g., Dunn, 1986; McCubbin & Patterson, 1981; Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1983; Thomas & Olson, 1993), findings from studies of non-clinical populations have quite consistently pointed toward the linearity of the relationship between family structure and indices of psychosocial competence (e.g., Eckblad, 1993; Green, Harris, Forte, & Robinson, 1991; Hendershot, 1989; Kitchens, 1991; Pratt, 1990; Stewart, 1992). Even more specifically, the relationship between family cohesion/ adaptability and coping has been found to be linear, rather than curvilinear, in the general population (e.g., Edwards, 1991; Gary & Gary, 1986; Johnson, 1983; McCubbin, Needle, & Wilson, 1985; Marotz-Baden & Colvin, 1989; Millington, 1994; Perosa & Perosa, 1993; Sharpe & Brown, 1994). Thus, this study seems to provide evidence of yet another population in which the relationship between family structure and adaptive coping is linear rather than curvilinear.

It is interesting, of course, to speculate as to why the relationship between family cohesion/ adaptability and coping strategies of gifted adolescents is linear, as opposed to curvilinear. Indeed, a number of potential explanations might be proposed. One interpretation, for example, is simply that the gifted adolescent population is more similar to non-clinical as opposed to clinical groups, at least in terms of this factor.

An alternate explanation relates to a "ceiling effect" on the FACES-III instrument. As has been suggested by other researchers (i.e., Pratt, 1990; Thomas, 1991), such a limitation of range could, in fact, place both "high/normal" and "extreme/ pathological" families in the same category. An illustration, perhaps, of this phenomenon comes from a study of the coping responses of family members of cancer patients (Zabora, Fetting, Shanley, Seddon, & Enterline, 1989). The results indicated that those families who evidenced maladaptive coping as identified by independent raters were extreme on FACES scales. The study also observed, however, that there were a like number of families who were "extreme" by FACES definition, but who did not evidence maladaptive coping patterns. The researchers thus concluded that the FACES instrument tends to generate false positives.

It is possible to take yet a third perspective which postulates that a family can function well at extreme levels of cohesion or adaptability if all members are satisfied with that condition. This, in fact, is the position espoused by the developers of the FACES-III instrument when confronted with the criticism of non-curvilinearity in certain populations (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1985). It should be noted, however, that no empirical evidence has been advanced in support of this hypothesis.

Perhaps, a final perspective on this linear vs. curvilinear controversy might focus on the very nature of the constructs involved. Boucher (1993), for example, has reported that family cohesion correlated positively with a measure of personal autonomy. This would seem to imply that a lack of autonomy—as one might expect to find in the case of true enmeshment—is not associated with high levels of family cohesion, and that individual autonomy and family cohesion may indeed be two separate constructs. Thus, an adolescent originating from highly cohesive family might face no serious limitations in terms of personal coping autonomy, and in addition might be able to draw upon a supportive family unit as an effective coping response.

As a result of the findings which have emerged from this study, it would seem that concern on

the part of educators and/or psychological support service personnel would not be warranted for those gifted adolescents who apparently reside in highly cohesive or highly adaptable families. A positive relationship between increasing family cohesion/adaptability and functional coping responses holds true, at least, in the case of those families so designated by the FACES-III instrument.

Certain limitations of this study, however, should be kept in mind. The study was limited insofar as it relied upon self-report instruments, as opposed to direct observation of family structure and coping responses. The sample was limited in that it was derived from the participants attending a summer enrichment program at the University of Virginia. This group was predominantly Caucasian and middle/upper class. Ages ranged from 10 through 16.

Thus, in future research, it might be well to broaden the age range sampled to include both preadolescents and late adolescents. Thus, it would be possible to study the relationship between family structure and gifted adolescent coping and potential changes of that relationship over a more extensive chronological territory. Given that the sample employed in this research was predominately Caucasian and middle/upper class, it could also be of importance to ascertain whether the relationships found in this study hold true across a variety of ethnic and socioeconomic configurations.

Note

The theoretically assumed orthogonality of family cohesion and adaptability, another central tenet of the Circumplex Model, did not hold true in the gifted adolescent population examined in this study. The correlation between these constructs—which should be zero if portrayed at right angles to each other—was .3903, thus denoted over 15% of the variance to be shared. This casts further doubt upon the applicability of the Circumplex Model with gifted adolescent populations.

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