Biosocial bases of aggression in ethnic populations

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\textbf{Abstract}

D. Oyserman, H. M. Coon, and M. Kemmelmeir (2002) offered a comprehensive literature review on individualism and collectivism that forwards valuable suggestions for ways to enhance future research conducted within this framework. The author argues that although their criticisms of much contemporary social psychological research on individualism and collectivism are valid, even more fundamental problems need to be recognized as characterizing work within this tradition, such as the insufficiently subtle nature of the views held of culture, the limited attention given to meanings, and the downplaying of contextual variation. The author suggests adopting more nuanced and process-oriented conceptions of culture and more contextually grounded views of its impact on psychological functioning as a way of realizing the promise of cultural psychology to broaden and provide insight into basic psychological theory.

\section{INTRODUCTION}

In the United States, children are facing a variety of stressors in the absence of appropriate coping mechanisms (Wang, Haertel, & Walberg, 1993). This is particularly evident for the early adolescent (ages 10-11) group because during these years adolescents experience biological, cognitive, and social-emotional changes in the midst of developing relationships with peers, parents, and teachers, as well transition to a new school (Jose & Kilburg III, 2007; Roeser, Eccles, & Sameroff, 2000).
Research suggests that gender differences in relation to social emotional development are evident during childhood and adolescence. Keiley, Bates, Dodge, & Pettit, (2000) and Lahey, Miller, Schwab-Stone, Goodman, Waldman, & Canino, (2000) report gender differences in behavior problems, such as aggressive behavior and antisocial behavior (externalizing problems), during childhood and adolescence, with boys showing higher rates of these problems than girls. However, early adolescent girls have been found to be more affected by interpersonal stressors that lead to internalizing problems, such as depression (Hampel, Meier, & Kummel, 2008).

It has become increasingly evident that the early adolescent age group represents a disproportionately high rate of failure – academically and emotionally, due to the inability to recognize, cope, and manage stress. Roeser, Eccles, & Sameroff (2000) estimate that 25% to 50% of all young people between the ages 10 and 17 are at risk for decreased educational, economic, and social opportunities because of high stress levels, as a result of inappropriate coping mechanisms and/or stress management. It is also reported that 60% to 80% of at-risk youth come from low socio-economic backgrounds (Roeser, Eccles, & Sameroff, 2000).

Increasing research suggests that evidence-based, school programs designed to educate early adolescent youth about stress and teach useful coping mechanisms can have a positive effect on psychological adjustment (Durlak & Wells, 1997). However, prior to implementing intervention/prevention programs schools should conduct school and community risk and needs assessments, in order to identify specific social and emotional needs (Zins, Elias, & Greenberg, 2003).

1.1 Conceptual framework

Educators have traditionally assumed that children acquire social skills as part of their natural development or else will acquire them once they enter the classroom (Ogilvy, 1994). By age three, children are capable of recognizing different emotions by paying attention to nonverbal cues and have a fledgling grasp of what causes feelings such as happiness, sadness, and fear (Elksnin & Elksnin, 2003). Upon entering school, they are expected to have basic expressive and receptive language skills, the ability to comply with instructions, a problem-solving repertoire, and a range of interpersonal skills (Lane, Givner, & Pierson, 2004). During this time, little attention has been paid to the social-emotional development.

As children advance in grade level, social and behavioral expectations become more rigorous, and students who fail to exhibit self-regulatory and collaborative skills risk negative outcomes within and beyond the school (Lane, Pierson, & Givner, 2003, 2004). In effect, “To succeed in school, family, friendships, the work-place, community life, and democratic participation, students need a full complement of skills — social, emotional, and academic” (Elias, Bruene-Butler, Blum, & Schuyler, 1997, p. 16). In reality, many children do not enter school with adequate social skills nor do they develop a complement of social, emotional, and academic competencies without intervention. For the past century, teachers across the globe have been concerned with students’ classroom behavior, recognizing that poor classroom adjustment may predict later delinquency (Poulou, 2005). Children with problem behaviors often become alienated from school and attempt to escape school discipline through
absenteeism and truancy (Beebe-Frankenberger, Lane, Bocian, Gresham, & MacMillan, 2005). The negative consequences are highlighted by the fact that school dropouts account for as many as 80% of all criminal acts (Poulou, 2005).

It is not unwarranted that mental skills such as the ability to cope with stress, maintain a positive attitude, relax when needed, and focus attention on achieving personal goals are conceptualized as “life skills” (Gilbert & Orlick, 1996). Gilbert and Orlick are among numerous sources that recognize the critical importance of teaching skills to elementary school children that will help them direct the course of their lives. Although traditionally categorized as “social skills training,” an alternative term is “social and emotional learning” (SEL). SEL is defined as “an approach that teaches individuals to recognize, regulate, and express the social and emotional aspects of their lives so they can successfully manage life tasks” (Norris, 2003, p. 314). The conceptual distinction is that SEL implies a curriculum for all students, whereas ‘social skills’ training typically denotes a more targeted intervention for children who manifest deficits in one or more skill areas (Ogilvy, 1994; Lane, Menzies, Barton-Arwood, Doukas, & Munton, 2005). An estimated 15% to 22% of U.S. children and youth have social-emotional problems that merit intervention (Elksnin & Elksnin, 2003).

Bandura (1986) describes one of his four sources of self-efficacy, somatic and emotional states, as particularly pertinent to understanding the impact of stress on children’s social-emotional development. Stress, tension, anxiety, and depressed mood diminish self-efficacy while positive mood and enthusiasm reinforce it. The relationship is bi-directional. Confident in their abilities, individuals with high self-efficacy approach tasks positively and energetically while those with low self-efficacy may view the same tasks as stressful or intimidating. Although self-efficacy and self-esteem are distinct types of self-concepts, they are frequently inter-related.

A framework for understanding childhood stress involves the interaction of several categories of stressors: extra-familial or environmental stressors, intra-familial stressors, and child characteristics (Webster-Stratton, 1990). Poverty is one aspect, for example, that is consistently implicated as an overarching cause of stress (Bradley & Corwyn, 2002). Low-income families are subject to more threatening and uncontrollable life events, exposed to more environmental dangers, and are more likely to experience destabilizing events such as family dissolution and frequent mobility. Attempting to cope with the stressors of poverty adversely affects the capability of parents to provide their child with a nurturing environment. This, in turn, can affect self-regulatory processes in the developing child, with the possible result that the child may develop behaviors that further strain parents’ limited coping ability. Harsh parenting and child abuse are more common in low-income homes and the damaging consequences of negative parenting has made parent training a key component of Head Start programs (Webster-Stratton, Reid, & Hammond, 2001, 2004). A sizable proportion of abused or neglected children develop prosocial skill deficits but research has shown interventions and social skills training can reduce the incidences of later anti-social behaviors (Howing, Wodarski, Kurtz, & Gaudin, 1990).

According to McCubbin & Patterson (1983), the family stress theory offers a framework for conceptualizing how families perceive and adapt to stressors. The adolescents’ perceived level of individual and family stress is particularly poignant in the adaptation process. For example, research has found that adolescents’ satisfaction with family life, especially family
Economic stability is related to increased emotional regulation which leads to improved adaptation (Papini, Farmer, Clark, Micka, & Barnett, 1990). Clark-Lempers, Lempers, and Netusil (1990) found a positive relationship between family financial stress and adolescents' reports of depressive symptoms. In another study of adolescent's reactions to family financial stress, youth reported a variety of worries and feelings of pressure and helplessness (Van Hook, 1990). In addition to stressor events, the coping strategies that families use relate to adolescent adaptation (Carson, 1995). McCubbin, Larsen, and Olson (1982) identified several coping strategies that families employ in response to stress: acquiring social support, refraining, seeking spiritual support, mobilizing the family to acquire and accept help, and passive appraisal. Incorporating such coping strategies has been found to be positively related to adolescent family life satisfaction (Elder, Conger, Foster, & Ardelt, 1992; Jurich & Russell, 1987; & Patterson & McCubbin, 1987).

1.2 | Literature review

The concept of childhood stress is often addressed from the perspective of risk and resilience. A large body of evidence shows that the cumulative impact of multiple stressors increases the risk that children will develop problems (Appleyard, Egeland, Manfred, van Dulmen, & Sroufe, 2005). Doll and Lyon (1998) for example delineate environmental hazards, ineffective or uncaring parenting, abusive treatment, and family dysfunction as four constellations of factors that predict negative adult adjustment. However, the authors concede that there is minimal clarity about the relative weight of each aspect.

Resiliency research has documented the vital importance of at least one adult on whom the child can depend (Garmezy, 1983; Rutter, 1983). Children who grow up under adverse conditions and seem to be “stress invulnerable” or “stress resistant” invariably have at least one adult figure that provided them with unconditional support. In the absence of positive parental support, extended family members, teachers, counselors, social workers, or other caring adults have the capacity to foster resilience in children.

Problem-solving resources and social support have been found to buffer the effects of stress in school children (Dubow & Tisak, 1989). Teachers give higher behavioral ratings to students who possess these skills, which are consistent with expectations for classroom behavior (Lane et al., 2003; Lane, Givner et al., 2004; Lane, Pierson et al., 2004; Lane, Wehby, & Cooley, 2006). Children who are deficient in social skills are most in need of social support, however, disruptive, aggressive, or apathetic behavior provokes negative responses in peers and adults alike. Consequently, problem-solving and social skills are an integral part of interventions for even young children (Webster-Stratton, Reid, & Hammon, 2001; Webster-Stratton & Reed, 2004). Problem-solving and social skills are part of the “Skills for Dealing with Stress” component of Skillstreaming (McGinnis & Goldstein, 1997). The following section will focus on stress from the perspective of risk and resilience. Additional sections of this chapter will discuss adolescents’ experiences and perceptions; adaptability; interpersonal stressors; intrapersonal stressors; coping mechanisms/stress management; and lastly, a summary.
Stress, Risk, and Resilience

Exposure to stress provokes physiological, emotional, and behavioral responses. The immediate and long-range effects of stress exposure can be explained by the concept of *allostatic load* (Bradley & Corwyn, 2002). *Allostatic* “refers to the body’s capacity to adapt and adjust to the demands imposed by environmental stressors via physiological changes” (p. 383). Bradley and Corwyn’s (2002) focus is on the impact of stressors related to low socioeconomic status (SES) on child development. Stress may have different effects over the course of the life span and the authors note that there is limited research on the precise mechanisms that underlie stress responses in children.

There is some evidence that early stress exposure can cause disregulated hypothalamic-pituitary-adrenal axis activity (an underlying cause of hyperactivity), disregulated serotonin activity (which may increase risk for hostility and suicide), and impaired immune system functioning, which increases susceptibility to illness.

Much of the research on stress, SES, and childhood development focuses on the adverse effects of poverty on parents. Unrelenting stress, uncertainty, and low social status associated with poverty can induce a sense of powerlessness, diminished self-esteem and self-efficacy and learned helplessness that manifest in states such as depression, anxiety, and hostility, all of which undermine interactions with family and friends leading to possible isolation for social support. This, in turn, may lead to the use of excessively harsh or lax control strategies in parenting children as well as lack of warmth or responsiveness towards the child. As a result, children are deprived of experiences that promote self-esteem and positive social adjustment both within their immediate family unit and any possible support from extended family outside of the home.

Researchers have found that “the absence of positive parenting, not just the presence of negative parenting,” is the mechanism connecting low SES to child adjustment (Bradley & Corwyn, 2002, p. 384). Parents’ involvement with children and optimism in the face of adversity has the potential to compensate for negative aspects of parenting. Even among children who develop behavior problems, competent parenting (despite family stressors) is associated with less severity and more positive outcomes for social skills interventions (Webster-Stratton et al., 2001). Conversely, children whose parents are harsh, coercive, or punitive are likely to derive limited benefits from programs that do not include a parent training component (Webster-Stratton et al., 2001; Webster-Stratton & Reid, 2004).

For the purpose of the present study, Chandler (1984) offers a definition of stress: “...a state of tension arising from events or situations, which the individual perceives as threatening. This state of emotional tension acts as a motivator as the individual, seeking drive reduction, attempts to cope with stress. That very attempt to cope may result in a number of stress responses ranging from healthy, effective ones to pathological ones that are not only ineffective, but are often counterproductive. In the case of children extreme responses result in behavior that calls attention to itself and interferes with effective functioning at home, in school, and in social relationships.” (p. 48).

The bi-directional nature of stress is evident in Chandler’s (1984) definition. Webster-Stratton (1990) states explicitly that, “Anyone who has worked with a conduct-problem child has undoubtedly been aware that the child’s family was experiencing considerable stress” (p. 302). The author’s conceptual model is based on the assumption that whether due to extra-
familial factors, interpersonal factors, or child factors, the presence of stressors creates a situation that demands a coping response from parents. The impact of these stressors on family functioning and interactions with children is contingent on each parent’s psychological well-being and personal resources as well as social and/or family support. Certain individual and family factors have been identified as protective factors or buffers against the effects of stress on family functioning, while others are vulnerability factors that exacerbate the family’s reactions to stress (Webster-Stratton, 1990). Important factors include the psychological characteristics of the parent, social support versus isolation, and parent gender and use of drugs. Social support has consistently been identified as a protective factor against stress, whereas social isolation or insularity has been linked with negative parenting and is common among parents of children who display problem behaviors. Probably due to their greater role in child-rearing or to internalized guilt over inadequate parenting, mothers report more stress in dealing with child behavior problems. Finally, parental substance abuse is associated with punitive discipline and lax monitoring of children’s behavior (Webster-Stratton, 1990).

Webster-Stratton (1990) is a staunch advocate of early intervention for families of children at risk for behavior problems (Webster-Stratton, 1990). There is empirical evidence that supports the fact that young children can benefit from a social skills and problem-solving curriculum (Webster-Stratton et al., 2001; Webster-Stratton & Reid, 2004). Positive results can be further enhanced with the addition of parent and teacher training (Webster-Stratton et al., 2004). However, many children enter elementary school lacking the requisite skills for academic and social success.

Compared to adults, children have limited resources for coping in several important ways. Foremost, children are dependent upon adults and they lack adult independence and mobility (Chandler, 1984). Second, they have a limited repertoire of coping strategies. Third, children lack the reasoning skills of adults; without the ability to conceptualize choices, they have lower tolerance for frustration and delayed gratification. Gilbert and Orlick (1996) emphasize that life skills programs for children must be tailored specifically. Some programs fail because they are based on adult models.

Ironically, despite consensus that stress has detrimental effects on children as well as adults, research on stress in children is somewhat limited (Bradley & Corwyn, 2002; Webster-Stratton, 1990). One issue confronting educators and counselors is how stress affects cognitive and behavioral functioning at different stages of development (Bradley & Corwyn, 2002). In their study of cumulative risks, Appleyard et al. (2005) examined the impact of stressors in early and middle childhood on adolescent functioning. The participants were 171 adolescents involved in an ongoing, prospective, longitudinal study of developmental outcomes in at-risk urban children. Poverty was the decisive inclusion criterion. Risk factors were those that routinely appear in the literature such as family instability, family stress, domestic violence, and child abuse.

The results supported the “cumulative risk hypothesis,” namely that “the number of risks in early childhood predicts an increase in behavior problems in adolescence” (Appleyard et al., 2005, p. 241). Cumulative risk in middle childhood was not associated with behavioral outcomes unless it was preceded by the presence of multiple risk factors in early childhood. The researchers acknowledged that their focus was primarily on risk factors (such as abuse and
violence) that are associated with externalizing behavior, noting that factors such as maternal depression may be more related to internalizing behavior patterns, particularly in conjunction with other stressors.

Anthony et al. (2005) explored the relationship between parental stress, parenting behavior, and children’s social competence in a sample consisting of 229 children enrolled in two Baltimore Head Start programs, 78 children attending three private daycare centers, and their parents and teachers. The researchers found significant interactions between children’s classroom adjustment and elements of parenting stress. Consistent with Webster-Stratton’s (1990) model, parenting stress was derived from both individual factors and parent-child interactions. Parenting stress was associated with stricter discipline and less nurturing behavior and had a pronounced impact on children’s social competence (Anthony et al., 2005). Parents’ expectations for their children’s behavior only weakly moderated the relationship between parenting stress and externalizing behavior.

Quamma and Greenberg (1994) investigated the role of family social support and social problem-solving skills on buffering the impact of stressful events on children’s behavioral adjustment. The participants were 322 fourth and fifth grade students who related stressful events they experienced over the last year. Illustrating the negative effects of stress, high levels of stress manifest in terms of externalizing problems reported by teachers and anxiety and conduct problems reported by students. Family support mediated these effects although social problem-solving skills only affected children’s reported conduct problems and did not address anxiety in the child or other issues. High levels of family support had a positive effect on the adjustment of students who were exposed to substantial stress (Quamma & Greenberg, 1994).

Understanding Resilience

The buffering effect of family support on stress experienced by children is consistent with the notion of resiliency. Historically, children identified as “at risk” were seen through the lens of a deficit model (Howard, Dryden, & Johnson, 1999). The concept of resilience arose from the observation that most children, even those exposed to multiple stressors, grew up to be healthy, well-adjusted young adults. A key factor in resilience was the presence of a caring adult (Garmezy, 1983; Rutter, 1983). In addition to social competence and problem-solving skills, internal resources linked with resilience include autonomy and a sense of purpose and hope for the future (Howard et al., 1999).

Howard et al. (1999) note that Rutter, who was instrumental in developing the concept of resilience, raised the issue of whether the shift from risk to resilience is actually a semantic rather than a conceptual change. Many protective factors identified in research are simply opposites of identified risk factors. According to Rutter (date), a factor or process is only protective if it moderates a risk factor. He delineated four types of protective processes: 1) those that reduce the impact of or exposure to risk; 2) those that reduce negative chain reactions following bad events or experiences; 3) those that promote self-esteem and self-efficacy through accomplishment; and 4) the development of positive relationships and new opportunities that provide essential resources or alter the course of one’s life.

Based on an extensive research review, Howard et al. (1999) delineated a number of “best practices” for promoting resilience in students. Their ideal classroom setting reflects the learning environment outlined by Elias et al. (1997). Elias et al. (1997) recognize that classroom
activities must be strategically structured to facilitate social and emotional development. Although it is fair and accurate to say that most children labeled “at risk” by virtue of poverty or related stressors do not become antisocial, a significant number of children enter school with risk factors that outweigh resilience and require intervention to develop protective processes. In fact, while criticizing the deficit model, Howard et al. (1999) conceded that, “this approach has spurred many imaginative, practical, and useful interventions” (p. 309). The flaw in the deficit model is that teachers may blame students for their problems or have low expectations for academic or social performance. However, it is essential to acknowledge that many children enter school with deficits that are amenable to change by well-designed interventions.

Several authors share the perspective that schools are the ideal place to implement interventions intended to foster resilience (Brooks, 2006; Doll & Lyon, 1998). The school serves as both an environment with the power to minimize risks factors and a place where children must learn to master the skills needed to become competent adults (Brooks, 2006). Doll and Lyon (1998) state that, “For those students who are at greatest risk due to accumulation of multiple risk factors, schools may represent one of the most potentially protective environments—encouraging the development of good problem-solving and academic skills, individual talents and other productive activities, and social competence” (p. 356). This implies that educators perceive these activities as an integral part of the school’s mission and are willing to reach out to at-risk students although this has not yet been proven through research studies.

Children’s Experiences and Perceptions

Resiliency theory and the stress-coping paradigm of Lazarus and Folkman (1984) served as the conceptual framework for understanding how children experience and perceive stress. The key concepts in the paradigm are stress, appraisal, and coping. Coping is defined as “the process of using cognitive and behavioral strategies to manage or alleviate the perceived stress and the resultant affective state” (Taxis et al., 2004, p. 478).

Taxis, Rew, Jackson, and Kouzekanani (2004) explored the relationship of protective resources (specifically, social belonging and coping skills) on the perceptions of stress in 613 white and Hispanic eight to 12 year old children. Ninety-eight percent of the students experienced fairly low levels of stress (Taxis et al., 2004). The children’s main stressor was “feeling sick” and there was no evidence that it reflected stress-related somatic complaints. Rather, Taxis et al. suggest that, “owing to their limited life experience, children may experience physical illness as a significant psychological, social, and physical stressor” (p. 481). The students’ two most frequently endorsed coping strategies were “watch TV or listen to music” and “draw, write, or reading something,” which Taxis et al. (2004) classified as “distractions” (p. 481). While immersing oneself in creative activities may reflect positive coping, the use of television as a coping mechanism is problematic. Gilbert and Orlick (1996) observed that after participating in a life skills program, second grade children most often used active coping strategies such as physical activity or relaxation techniques and were less likely to turn to passive entertainment.

Peer relationships can be stress producing or stress protective for children. An interesting finding reported by Taxis et al. (2004) was a significant correlation between sense of humor and social connectedness. While there is research confirming the positive impact of
humor on the well-being of adults, it has been given scant attention in children. Taxis et al. suggest that humor may be an “untapped resource” that can be developed to children’s benefit.

Using resiliency research as a framework, Nettles, Mucherah, and Jones (2000) investigated the mediating effects of social resources on African American students using data from elementary school students in an impoverished, high-crime community and projects involving other students from similarly disadvantaged backgrounds. By all accepted definitions, these students are classified as “at risk,” yet there was ample evidence that social resources have the power to buffer the negative consequences of poverty.

Nettles et al. (2004) conceptualize social resources in terms of two coping strategies: increasing resources and building on adaptive processes. Specifically, “resource-focused strategies seek to reduce the negative consequences of exposure to risk by increasing the level of resources or improving access to resources” (p. 57). Social resources included having caring parents who convey high expectations for their children and are involved in their education, participation in extracurricular activities, and supportive teacher-student relationships. In addition to positive resources at home and at school, Nettles et al. (2004) also emphasize the importance of providing children and youth (particularly adolescents) with opportunities to interact with adults in community settings. Their research shows that relationships with supportive adult role models help instill a sense of optimism in adolescents and is linked with extracurricular involvement and academic success.

Erikson (1950) recognized that once children enter school, it becomes the central point of their psychosocial development. For most students, self-esteem is intrinsically linked with academic success. Several advocates of social and emotional learning emphasize that the philosophy of SEL is congruent with educational standards (Elias et al., 1997; Norris, 2003). Theoretically, the self-regulatory and problem-solving skills that are part of SEL and social skills programs are applicable to academic contexts and a large body of research documents a connection between self-efficacy and academic performance (Bandura, 1997). However, it was clear that the Australian students thought teachers and parents should provide students with more concrete assistance for academic success (Howard & Johnson, 2000).

The results of the elementary school study demonstrated that children’s exposure to neighborhood violence had a significant negative impact on their academic performance (Nettles et al., 2004). Nettles et al. (2004) emphasize the importance of targeting interventions to reduce the detrimental impact of violence and/or increase children and family’s access to social support resources. They also recommend building on strategies that enhance adaptation to stressful environments. Consistent with Howard et al. (1999), Nettles et al. (2004) call on teachers to create caring, supportive learning environments that provide students with opportunities for mastery experiences as a means of promoting resilience.

Luthar (1991) conducted a study of stress and coping in a sample of 144 ninth grade students attending an urban, inner city school. Their emphasis was on the role of personal resources. One key protective mechanism was internal locus of control, which was linked with assertion in the classroom. In contrast to their peers with internal locus of control, the performance of students with an external orientation declined under increasing stress, reflecting the notion of learned helplessness. McGinnis and Goldstein (1997) consider providing students with opportunities for self-mastery as a way to boost self-esteem as an effective way to counteract
externality and consequent learned helplessness. Self-esteem typically increases when children see that they have the competence to affect outcomes.

Social skills, particularly social expressiveness, increased students’ popularity with peers and had a significant protective effect on stress (Luthar, 1991). Virtually all sources reviewed for this project agree that social skills are essential for buffering against stress and can be effectively taught through interventions. Intelligence and positive life events proved to be a vulnerability rather than a protective factor although most studies report the reverse and suggest that intelligence and having a positive outlook can be a protective factor. One finding consistent with the bulk of research is that ego development had a powerful protective effect. Ego development was positively associated with academic performance and classroom assertion and negatively correlated with disruptive behaviors.

Howard and Johnson (2000) investigated childhood resilience in a qualitative study of 9 to 12 year old children and their teachers, drawn from economically disadvantaged schools in South Australia. The participants (125 students and 25 teachers) were initially asked what they thought was a “tough life” and why “some kids have a tough life and don’t do O.K.,” or alternately, “have a tough life but do O.K.” Using their responses as a conceptual basis, the researchers delved into what made the difference between children with positive and negative outcomes.

Both teachers and students acknowledged the importance of the family in promoting resilience in children who had a “tough life” (Howard & Johnson, 2000). The most important relationships were between parents and children, with other family members playing a supportive role. An intriguing distinction between the responses of teachers and students was the emphasis the students placed on academic support in both the home and school setting. Whereas teachers focused on the school’s role in creating a comfortable and secure environment and teaching social skills, the students “talked less about the school’s role in providing social support and much more about providing special help to overcome learning difficulties” (p. 329).

Students and teachers agreed that the school played a role in fostering social and emotional development in children with “tough lives” (Howard & Johnson, 2000). However, there were differences in their responses. The teachers placed more emphasis on their responsibility for creating a safe, secure learning environment while the students were more concerned about interactions with peers. To the students, being bullied seemed to be a major cause of a “tough life.” This appears to be a universal phenomenon and is an underlying cause of the proliferation of SEL programs.

The students cited discussing problems with understanding teachers and counselors as an important mechanism for reducing the stress of a “tough life” (Howard & Johnson, 2000). However, with their overriding emphasis on academic help, the students gave higher priority to programs such as a Learning Assistance Program in which mentors from outside the school came to work with individual students. The most striking result of the study was the marked discrepancy between teachers and students. Teachers may see social skills and a positive learning environment as precursors to academic success and therefore view academic success as an implicit result. However, children think in concrete terms and are acutely aware of the adverse effects of academic difficulties on future success.
A U.S. study of stress in fourth and fifth grade students confirmed that academic performance is a critical issue for children. Asked to cite the two things that made them most nervous, academic concerns topped the list (Romano, 1997). The most prevalent stressors were tests (including test preparation, test-taking, and grades), cited by 15% of the students; academic/school concerns (13%), and oral presentations (13%). Next on the list were peer relationships (10%) and athletic performance (10%), followed by family stressors, non-athletic performances (such as dance recitals or plays), personal safety, and health, with only 3% of the students identified being in trouble as a personal stressor.

The greater emphasis the teachers surveyed by Howard and Johnson (2000) placed on social rather than academic factors in promoting resilience may reflect an implicit connection between the social and academic dimensions in school success. A series of studies conducted by Lane and colleagues showed that teachers have certain expectations for classroom behavior that they deem essential to success within and outside of the school. The researchers contend that understanding teachers’ expectations of prosocial classroom behavior can be used to design, improve, and evaluate social skills interventions and help ease the stress for students making transitions from one school to the next (Lane et al., 2006).

Gender Differences

Many of the studies conducted around children and stress have focused more on the biological nature of stress and whether or not these biological factors are impacted by gender in terms of stress development. Davis and Emory (1995) sought to determine if hormonal differences between male and female newborn children were correlated with stress reaction and gender differences. The procedure used was relatively invasive in the researchers took cortisol readings from inside the baby’s mouth and monitored the heart rate with electrodes placed on the chest area.

The findings of the study indicated that male babies were more inclined to show differences in their cortisol levels that peaked up to fifteen minutes after the experiment was completed. In contrast, female babies showed an increase in heart rate, but not in cortisol levels. Further, females stress reaction was also considered to be less because their heart rate returned to normal within ten minutes rather than the fifteen minutes it took for the males to return to normal. Although the findings were not conclusive they were indicative of the fact that males and females experience and react to stress differently, with the males showing a stronger reaction to stress, that took longer to recede. One of the limitations of this study was that the very nature of the study itself was a stressor.

To further examine gender differences, Fox, Bell and Jones (1992) also measured the stress reactions in infants but they used a less invasive procedure. These researchers measured brain activity for thirty-three newborns, while they were experiencing their stress (the action for which was removing the child from its mother). From a brain activity perspective those children who exhibited increased asymmetrical activity in the brain were more likely to show outwards signs of distress such as crying, while those children who showed the most activity in the right frontal lobe were those most distressed by the incident. Again although the findings were not conclusive the authors did note that it was the male children who displayed the most distress in being taken away from his mother (Fox et al., 1992).

Monitoring stress in newborns is difficult simply because the researcher has to assume levels of distress from physical signals shown by the individual baby and then compare those
findings to others. Although both studies mentioned here monitored physical symptoms that could be indicative of stress assumptions, particularly regarding female newborns and stress could be subject to differing interpretations. Both studies found that male newborns showed more physical signs of stress and took longer than female newborns to recover from that stressful action, but as stress in children, even small ones, could be dependent on a number of other factors aside from physical indicators these findings can only be discussed in context, rather than with any conviction.

Moving on to slightly older children, Karns, Meredith and Wang (2003) completed a study on preschool children in China and how they reacted to stress. In this study the children were given specific instructions on what toys they could play with and which ones they had to leave alone. Using observational input the authors believed that those children who did not follow the instructions given properly and played with toys they were told to leave alone were more likely to show outward signs of stress such as nervousness at getting caught, or guilt. Karns et al (2003) determined from their study that once again female children showed the least amount of stress during the exercise but the authors were not clear on whether this was because they did not care as much if they disobeyed instructions or if it was because they did exercise more self-control and were less likely to disobey the instructions in the first place.

Causey and Dubow (1992) looked at the aspect of stress from an elementary school perspective based on how children were more likely to cope with stress that arose from interactions with school peers and the school system itself. Once again these authors found strong differences between male and female subjects, supporting the fact yet again that females had a better or higher level of coping with stress than exhibited by males. Specifically, they found that females were more likely to use problem-solving techniques or seek out social support than males did (Causey & Dubow, 1992). A later but similar study conducted by Anshel and Delany (2001) concentrated on studying child athletes between the ages of 10 and 12 years. They found that the coping mechanisms were different according to gender in that males became more resigned to their situation when stressed whereas females appeared to be more pro-active in that they used confidence building self dialogue and other methods to help themselves feel better about a situation (Anshel & Delany 2001).

Smith and Prior (1995) found that in a group of eighty-one children who came from family situations that were under stress, that gender was not a predictive factor in determining a child’s ability to cope with stress. These findings were supported by a later study by Ruckman, Burts and Pierce (1999) who found that children who were in an inappropriate class situation for their level of ability showed no clear correlations between gender and stress, despite the fact that these researchers had hypothesized, based on previous literature, that males would show more stress signals than their female counterparts.

Although the literature is sparse, a few researchers have addressed the concept of gender role conflict as a source of stress for the adolescent population Heilbrun, 1989; Shaw, 1983; & Blazina & Watkins, 2000). Children initially learn gender stereotypes and biases in the home. Ultimately, these attitudes and behaviors are reinforced by peers, school experience, and the media as they assimilate into adolescence (Eccles, Jacobs, & Harold, 1990). Gender role socialization has emerged as a proponent of emotional distress in adolescent girls as well as boys. Hill & Lynch (1993) postulate that many girls and boys experience pressure to conform his/her behavior to gender expectations as they reach puberty and as a result problems
develop. Whereas adolescent girls tend to develop internalizing problems, such as depression, adolescent boys acquire externalizing problems, such as aggression and antisocial behavior (Kovacs, Obrosky, & Sherrill, 2003).

There are a number of different reasons that could impact this lack of conclusive findings with relation to stress and gender. The findings presented here do show in the most part that females react differently and (according to the research) to a lesser degree to stress than do their male peers, but even that cannot be predicted with any certainty as shown by the studies from Smith and Prior (1995) and Ruckman et al., (1999). What is clear from this section of research is that males and females do react to and deal with stressors in a different manner, but that it is more likely that as children get older their reactions to stress are impacted more by environmental elements such as prior life experiences and personality traits than gender alone. Definitely the total number of elements that could impact a child’s response to stress could be that vast that reaching a conclusive decision about how stress impacts individual children could be very difficult. Just some of the factors that would need to be studied could include but not be limited to age, gender, education level, demographic elements and social development level. Other factors that would also need to be considered could be religious background, parental styles, culture, family dysfunction history, biological and hereditary elements, and whether or not the child had any previous trauma that could result in a more marked reaction to later stresses.

2 METHOD

The purpose of the study is to examine the role that gender, race, socio-economic, and education status plays on the emotional well-being of male and female adolescents. Archival data were used in this correlational design to determine if relationships existed between the demographic variables listed above and emotionality factors – adaptability, interpersonal stress, intrapersonal stress, general mood, and stress management.

2.1 Research Design

The study utilizes a non-experimental, correlational design to examine the role that stress plays on the emotional well-being of male and female early adolescent youth. A demographic questionnaire and self-report rating scale will be utilized to determine if relationships exist between demographic variables - gender, race, socio-economic status, and education status and emotionality factors - adaptability, interpersonal stress, intrapersonal stress, general mood, and stress management.

2.2 Participant information

Ages 10 – 11, approximately fifth grade, marks the beginning of early adolescence (Jose & Kilburg III, 2007). With early adolescence comes the onset of many stressors – physiological,
psychological, environmental, and social (Humphrey, 2004). Approximately 70 male and female students from five 5th grade classes are included in the study. The classes include: three general education, one inclusion; and one upper learning disabilities. The students attend a second through sixth suburban elementary school in South Jersey. For the purposes of the study, this school will be identified as First Elementary School.

First Elementary School is one of four elementary schools in the district. Over four-hundred fifty students are in attendance. There are four 2nd grade general education classes, three 3rd grade general education classes, three 4th grade general education classes, four 5th grade general education classes, three 6th grade general education classes, one inclusion class at each level (i.e. 2nd, 3rd, 4th, 5th, & 6th), one lower learning disabilities class (3rd & 4th), and one upper learning disabilities class (5th & 6th).

2.3 Procedures

First Elementary school is of particular interest in this study because it is the only school in the district where data were collected to aid school personnel in the development of a stress management curriculum to be utilized by the guidance counselor. The principal investigator met with the principal of First Elementary School to obtain approval to use the data. The school’s curriculum team and guidance department collected the data during routine guidance lessons. The information obtained from the BarOn Emotional Quotient Inventory: Youth Version (BarOn EQi:YV) and student profiles were anonymously coded in a database.

3 RESULTS

This current study was initiated to gain a better understanding about...This chapter will focus on... by beginning with a brief summary of the key findings of the statistical analysis. Couched within the discussion of the research questions are underlying assumptions about...Finally, future implications and limitations will be offered with a summary statement.

Summary of Key Findings

The key findings of this research were based on three main research questions, including:

1. What is the relationship between the Bar-On EQI scale raw scores and gender?
2. What is the relationship between the Bar-On EQI scale raw scores and socioeconomic status (SES)?
3. What is the relationship between the Bar-On EQI scale raw scores and ethnicity?

These research questions were tested across five subscales (Intrapersonal Stress, Interpersonal Stress, Adaptability, Stress Management and Mood) as well as the overall EQ score. These research findings were generated in SPSS.

The sample (n = 71) was primarily aged 12, and most respondents were female. The majority of respondents were enrolled in the general educational, with majority of the rest enrolled in the special educational. The majority of the respondents were Caucasian.
Distribution of SES level was bimodal, with most respondents having family income of less than $24,999 or between $50,000 and $74,999.

In terms of the distribution of scores, the raw scores showed a higher degree of variability in intrapersonal stress and stress management, with lower variability in interpersonal stress and overall EQ. All pairs of variables except Adaptability and Intrapersonal Stress showed statistically significant correlations, with the strongest correlation being between EQ and Interpersonal Stress \(r = .770\).

Inferential tests for the relationship between demographic categories (Gender, SES, and Ethnicity) and EQ and its subscales were performed using one-way ANOVA (for EQ differences by demographic category) and MANOVA (for subscale differences by demographic category). Testing for gender showed that only Stress Management \(F(1, 71) = 5.129, p = .027\) had a significant difference, with girls having higher Stress Management scores. No difference was found between genders for EQ. Testing for SES also showed limited differences, with only Adaptability \(F(3,67) = 3.316, p = .025\) reaching significance for the subscales. This difference stemmed from a significant gap between those with family income under $24,999 and those with family income from $75,000 to $99,999 (with the low-SES group having a mean difference of \(4.78\) from the high-SES group). There was no significant difference in EQ by SES. There were no significant differences for EQ or its subscales by Ethnicity.

4. DISCUSSION

Clearly, the findings of this research do not support a strong relationship between demographic characteristics such as Gender, SES, and Ethnicity and the outcomes of the Bar-On EQI scale scores or total score (when tested using the raw scores). This suggests that there are no major differences based on demographic grouping among early adolescents that can be detected using this score (although of course there are multiple emotional intelligence scales, and results could vary depending on the scales used within the research). While these findings are not necessarily illuminating in terms of differences between adolescent groups, they do provide an excellent opportunity for practice, since the differences in individual performance can be presumed to be largely due to the individual variations in stress management and emotional intelligence, allowing for more careful targeting of assistance for children in need.

First, there is a clear need to be able to identify within the individual child the effects of interpersonal stress and stress management skills, in order to prevent harm that could be irrevocable. The need for the ability to determine whether a given child is undergoing stress management strains or excessive degrees of stress, as tested by the Bar-On EQI scale, is outlined by a number of studies that highlight interpersonal stress and stress management effects on academic achievement and school experience (Beebe-Frankenberger, Lane, Bocian, Greshem, & MacMillian, 2005; Webster-Stratton, Reid, & Hammond, 2004). In particular, these children may face negative reactions from teachers, as these children often have difficulty coping with interpersonal stress in the classroom or in social settings outside the classroom (Lane, Givner & Pierson, 2004). Thus, this both negatively affects the child’s ability to achieve academically and negatively affects the teacher’s willingness to assist in adjustment of the learning and social environment. By the mid-1980s, it was recognized within the literature that
children previously perceived as acting out or disruptive were in fact having difficulty in managing interpersonal relationships, rather than being deliberately disruptive (Chandler, 1984). However, the problems that face children and that may negatively affect their ability to function, including social issues, changes to family dynamics, and individual coping skills learned, may still be regarded as an adult problem or not be recognized by the teacher or classroom assistant (Appleyard, Egeland, Van Dulmer, & Sroule, 2005; Garmezy, 1993; Anshel & Delany, 2001; Bradley & Corwyn, 2002). Thus, there is a clear requirement that schools should be able to transform the behavioral observations, such as acting out, into a more concrete causation, such as family stress, social stress, poverty effects, or physiological or social issues. Furthermore, the research suggests that the school environment, in which children are already accustomed to structured learning and teaching activities, may be ideal for learning coping skills and resiliency of this type (Brooks, 2006; De Wolfe & Sanders, 1995). However, in order to do that, the school would need tools to use.

The current study does not support that demographic characteristics, including Gender, SES, and Ethnicity, can be used to predict dimensions of emotional intelligence in any particularly useful fashion. In fact, it implies the opposite – there were only a few significant relationships between these demographic characteristics and various subscales of the EQI score. The existing literature, however, does support a difference in the outcomes of the test based on known differences in coping skills based on these demographic characteristics. Thus, the findings of this research were slightly surprising.

The evidence for support for the literature findings is strongest in the area of gender, which showed that females had significantly higher stress management skills than males (the only category which was important). The connection between EQI subscale scores and overall score and gender was suggested by a number of studies detailing the connection between gender and stress management and indicators of stress. Many of these differences have focused on biological stress indicators. For example, Davis and Emory (1995) found physical differences in stress response between male and female newborns, with male newborns showing more sustained cortisol level increases, and female newborns showing increases in heart rate but not cortisol levels. This suggests that biologically, females may have more resilience to stress than males. A second study performed on newborns showed that males showed a stronger stress response than females, including asymmetric brain activity and outward stress signals (such as crying) (Fox, Bell, & Jones, 1992). However, these results were not conclusive. An observational study conducted on preschool children in China also showed that female children showed fewer outward signs of stress, though the reasons for this reduction in stress were unclear (Karns, Meredith, & Wang, 2003). At the elementary level, a study also found that female children were more likely to use stress management techniques like problem-solving or social support than males (Causey & Dubow, 1992). However, a number of studies have shown that under conditions of unusual stress, there is no evidence that female children have better ability to cope with stress (Smith & Prior, 1995; Ruckman, Burts, & Pierce, 1999). Overall, the literature provides some support for a gender-based difference in stress management skills, but these differences are conflicted and contested, and may not hold up under conditions of abnormal stress. Overall, the findings suggest (relatively weak) support for the literature’s conclusion that girls have somewhat stronger stress management techniques. However, there is no evidence from the findings, especially the interpersonal stress and
intrapersonal stress markings, that girls do not actually experience as much stress – these scales were statistically similar. This is contradictory to the physical studies on newborns, which suggest that females actually have a reduced physical stress response.

The only difference found in socioeconomic status (SES) is differences in Adaptability between children with family income below $24,999 and those with family income between $75,000 and $99,999 (that is, the lowest and highest SES groups). There are a number of suggested mechanisms for differences in social skills based on SES. These include negative parenting and the absence of positive parenting (in particular involvement and optimism) in lower-SES groups (Bradley & Corwyn, 2002; Webster-Stratton et al, 2001). Additional stressors that may affect adaptability in low-SES families could include domestic violence and substance abuse, although these factors also occur in higher-SES families (Anshel & Delany, 2001; Bradley & Coryn, 2002; Garmezy, 1993). However, a more significant issue is likely to be the ability to create protective boundaries and provide nurturance and support for children undergoing stress, which higher-SES families are likely to have more time and resources available to do (Anthony et al, 2005). Furthermore, lower-SES families may face strains on resources that impose physiological stress on children, including food insecurity and other factors (Bradley & Coryn, 2002). Early physical stress, such as malnutrition or food insecurity as well as emotional stress, could result in dysregulated hypothalamic-pituitary-adrenal axis activity, causing behavioral symptoms including hyperactivity, hostility, impaired immune system, and dysregulation of the serotonin system (Bradley & Coryn, 2002).

The least evidence for differences between groups was found for Ethnicity, which showed no significant differences in any of the subscales or the main EQ score. In some respects, this was expected, given relatively little evidence for differences in ethnicity and stress response. Furthermore, other studies regarding stress response in children (many of which are detailed above) do not make a difference in stress response in other situations (Anshel & Delany, 2001; Bradley & Coryn, 2002; Causey & Dubow, 1992; Garmezy, 1993; Smith & Prior, 1995; Ruckman, Burts, & Pierce, 1999). Thus, this was not an unexpected response in this study, which was included primarily for demographic completeness. However, there are still some potential issues in this finding. In particular, there is the suggestion within these findings that perceptions of difference in stress response and behavior attributed to differences in ethnicity may in fact be magnified by internalized stereotyping. This is something to consider when planning stress management and social skills interventions for individuals or groups.

Limitations

4.1 Implications for Research and Practice

Although children may struggle with stress management and coping skills, as noted above, this does not mean that there is nothing to be done for them. A number of studies have shown that intervention programs that teach positive behavioral and emotional responses and characteristics such as resilience and stress management can provide a valuable support for the development of effective coping skills (De Wolfe & Saunders, 1995; Hampel, Meier, & Kummel, 2008; Pincus & Friedman, 2004; Romano, Miller, & Nordness, 1996; Zins, Elias, & Greenberg, 2003). In particular, developing interpersonal and intrapersonal skills and stress management
skills and improving access to stress management resources can improve social and academic outcomes for children (McGinnis & Goldstein, 1997; Nettles, Mucherah & Jones, 2000).

In order for children to be offered intervention programs, there needs to be an approach to identifying students that require intervention and assistance. There are a number of existing approaches that collect this information, with most of these methods being based on student self-reporting of emotional characteristics and state (Zins, Elias, & Greenberg, 2003). However, self-reporting is routinely ineffective, particularly among younger children, who may not be able to effectively describe stress signs (attributing physical signs of stress to bodily illness) (Taxis et al, 2004). Thus, there needs to be a more robust approach to determining which children are in need of social learning skills.

On the one hand, the findings of this report suggest that potentially all students could benefit from improved social skills and a social learning curriculum, since there are so few significant differences in outcomes based on demographics (especially socioeconomic status). This is consistent with the social and emotional learning (SEL) approach suggested by Norris (2003), in which all students are offered a curriculum for learning interpersonal and intrapersonal skills, coping mechanisms, and stress management techniques. In many respects, this research most clearly supports the SEL approach; given that the students do not have a strong degree of difference based on their demographic characteristics, this suggests that all students could use improvement in this area, making a general curriculum plausible.

On the other hand, the findings of this study also suggest that there should be a modified approach to determining which students require improved access to social skills training (Ogilvy, 1994; Lane, Menzies, Barton-Arwood, Doukas, & Munton, 2005). Social skills training is a specific approach that is intended to rectify observed deficits in social interaction styles, stress management, and interpersonal relationship formation and management (Ogilvy, 1994; Lane, Menzies, Barton-Arwood, Doukas, & Munton, 2005). This approach is targeted, rather than general, and allows for specific learning of deficit-related skills. Approximately 15% to 22% of US children may merit intervention using a social skills approach (Elksnin & Elksnin, 2003). Of course, if a general SEL approach was used, this figure could fall significantly as children pre-learn coping and social skills appropriate to their developmental level. However, there is still a significant need for the ability to determine which children require additional social skills assistance, which could be particularly difficult during the turbulent adolescent period and under conditions where home life and conditions are not known. Given the relative lack of significant differences in mean between students based on demographic characteristics, this suggests that the Bar-On EQI instrument would be a useful rapid screening tool for determining which students may require additional assistance in social skills learning. The use of the Bar-On EQI instrument, which asks specific and measurable questions and has an established baseline of normal response, would help teachers and administrators overcome assessment problems including reluctance to self-report specific issues and the known tendency of children and young adolescents to interpret the effects of interpersonal and intrapersonal stress as physical illness (Taxis et al, 2004).

In short, while the findings of this research do not generally support expected mean differences in emotional coping and stress management skills, they do identify a change to practice that could be used to significantly improve practice in terms of identifying which children may require additional social skills support. This could prove to be invaluable in terms
of determining how the school’s resources can best be used to support students and provide improved social learning and experience.

Given the findings of this research, the main recommendation for practice is that the Bar-On EQI test should be considered for use as a screening tool in order to determine which children require additional social supports. Of course, this cannot be undertaken as a sole screening method, since there are a number of psychological and physiological conditions that can cause similar social function issues, and that need to be accounted for as well. Additional research should also be conducted in order to verify that this approach is effective in screening children that require additional social skills training. This is particularly relevant given that this study did not attempt to identify individual behaviors or correlate these behaviors with EQI scores; thus, this research needs to be done in order to verify that the Bar-On EQI test is appropriate for identifying children with additional need for social skills intervention. An approach to this additional research will be discussed in more detail in the following chapter, which will detail how the study could be conducted in order to establish the effectiveness of the Bar-On EQI test as a screening instrument.

References


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