

Social Competence in Context: The Moderating Effects of Culture and SES on the
Correlates of Competent Functioning with Peers in Canadian and Colombian School
Children

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Abstract

Social Competence in Context: The Moderating Effects of Culture and SES on the
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Children

Shari Mayman, Ph.D.

Concordia University, 2005.

The goal of this research was to assess the processes that underlie children's social competence in different cultural and social contexts. Multilevel modeling was used to examine the effects of culture, SES, and sex on the relationships between (a) the predictors and indices of social competence, and (b) social competence and depressed affect, in high- and low-SES children ($n=1067$) in grades 4, 5, and 6 in Colombia and Canada. Findings indicated that the strength of the associations between the individual characteristics of social avoidance, athleticism, aggression, and caring, and the social competence indices of friendship and liking varied across culture, SES, and sex in unique ways. Specifically, social avoidance was a stronger negative predictor of social competence among high-SES than among low-SES individuals, especially among Colombian children. There was an overall positive relationship between athletic competence and peer competence, but this association was strongest among low-SES boys. Aggression was a stronger negative predictor of social competence among boys than among girls, especially among Canadian children. There was an overall positive relationship between caring and social competence indices, but this relationship was stronger for low-SES individuals than for high-SES children. The relationship between

social competence and depressed affect was moderated by a three-way interaction between culture, SES, and sex; the strongest association between these variables occurred among high-SES Colombian girls. These findings highlight the importance of considering within-culture differences in conjunction with between-culture differences, and are discussed in relation to the distinguishing dimensions of individualism and collectivism.

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Relations with peers contribute uniquely to social, emotional, and cognitive development, as well as to psychological adjustment in childhood and adulthood (Hartup, 1992). Socially competent children are more likely than others to gain access to the social situations and interactions that result in positive developmental experiences, which ultimately serve to promote health and well-being (Bukowski, Rubin, & Parker, 2001). In so far as competence is both an antecedent and a consequence of experiences with peers, studying the association between them is crucial to an understanding of the nature of social competence as well as to an understanding of how experiences with peers contribute to development. Moreover, examining the ways in which culture and context shape the antecedents and consequences of social competence in children serves to further enrich our knowledge about individual differences in social competence and sheds light on the phenomenon itself.

The purpose of the present study was to examine the differential correlates and consequences of social competence among peers for boys and girls from upper and lower socioeconomic (SES) groups in two cultural contexts; specifically that of Montreal, in Quebec, Canada, and of Barranquilla, a city on the Caribbean coast in northern Colombia. The study goes beyond a simple examination of mean differences between levels of social competence in different cultures. Instead, it sought to assess differences in the processes or phenomena that underlie social competence in different cultural and social milieus.

This project was based on three premises. The first is that understanding how children function within the peer group is critical to our understanding of development

(Rubin, Bukowski, & Parker, in press). The second is that cultures differ according to the value and properties that are ascribed to different aspects of social functioning. The dimensions that have been used most frequently by psychologists to distinguish between cultures are individualism and collectivism (Hofstede, 1980; Oyserman, Coon, & Kemmelmeier, 2002; Schneider, 1993; Triandis & Brislin, 1984). These dimensions of cultural variation are considered to be an important basis from which to understand the patterns of social behavior in a given culture. More importantly, they are believed to determine which social skills are valued by members of that culture, and serve to define socially competent behavior (Ogbu, 1981). The third premise is that there would be within-culture differences in the correlates of social competence. Specifically, due to differences across culture and social groups in the levels of individualism and collectivism, manifestations and perceptions of social competence and the processes underlying it would be expected to differ across subgroups (e.g. socioeconomic groups) within a culture as well. For example, children from high socioeconomic neighborhoods within one culture may view certain social skills as more important or desirable in a playmate than children from low socioeconomic backgrounds within the same culture. Culture may also play a role in determining the outcomes of socially competent individuals. For example, the consequences of a lack of social competence may be more dire in collectivist cultures (such as those in South America), where there is greater interdependence and integrity of ingroups (Triandis, 1989). In the present investigation both cross and within-culture differences in the predictors of social competence between older school age children in two cultural contexts were assessed, and the role of social

competence in children's affective well-being, and how this might vary across and within cultures, was examined.

Culture and Development

Two questions serve as the conceptual point of departure for the study. They are: Why study development using cross-cultural methodology? What does cross-cultural research add to the study of developmental processes? Developmental psychology in general, and social development in particular, are well suited to benefit from cross-cultural research. Developmental theory has been concerned with the ways in which individuals interact with their environments, and the effects that result from these nature-nurture interactions. Questions about the influence of culture on human development and behavior stem from a long history of examining the role of context factors in child development theory (see Schneider, 1993, for a complete review of this topic).

Early psychoanalytic theory depicted human behavior as largely governed by biological needs and drives (Langer, 1969). Although parents (particularly mothers) were seen as important agents of socialization, other contextual factors were not truly acknowledged until the work of Eric Erikson and Harry Stack Sullivan (Langer, 1969). Erikson departed from Freud by postulating that important developmental tasks continue beyond early childhood and are thus influenced by the contexts (e.g. home, school, peer group, culture) in which children function. The interaction between these contexts, however, was not considered within Erikson's theory (Buss, 1979). Stack Sullivan (1953) placed considerable emphasis on the peer context in his interpersonal theory of psychiatry. The process of "chumpships", or same-sex friendship, was regarded as a

critical developmental context that outweighed the influence of family during the period of early adolescence. Sullivan also acknowledged the role of culture or “society” in the development of personality, and highlighted the possibility of tensions between familial and societal influences.

The role of context factors in development was inherent in the early work of learning theorists (e.g. Miller, Dollard and Watson), who set out to refute the notions of development as a “maturational unfolding” independent of learning or context that were popularized by such Darwinian-inspired scientists as Arnold Gessell (Dixon & Lerner, 1988). Behaviorism, with its central tenet that all psychological activity is determined by stimulation from the environment, elevated the role of context in psychological theory, and inspired much of the later work on contextual factors in developmental psychology (Dixon & Lerner, 1988). Social learning theory (Bandura, 1978), in which the contexts of home, school, community, and mass media provide salient models for learning and imitation, was a natural extension of classic stimulus-response theory.

Piaget’s cognitive-developmental theory sensitized psychologists to the *interplay* between the individual and the environment. However, within Piagetian theory, the origin of the processes that result in this interaction are intrinsic within the individual and do not depend on socializing agents in the environment for their activation (Schneider, 1993). Vygotskian theory placed more of an emphasis on sociocultural factors in shaping children’s development. Kozulin (2003) argues that the key concept in Vygotsky’s reorientation of learning theory from an individualistic to a sociocultural perspective was that of psychological tools – symbolic artifacts such as language and symbolism that are

internalized and affect one's perception, attention, and memory. Given that each culture has its own set of psychological tools, neo-Vygotskians have begun to examine applications of his theory to different cultural contexts (see Kozulin, Gindis, Ageyev, & Miller, 2003).

Although the history of the aforementioned theories represents a gradual shift from acontextual formulations of development to formulations that emphasize contextual factors to varying degrees, the advent of "systems" approaches resulted in new ways of conceptualizing both context factors and the relationships among them. Bronfenbrenner (1979) defined the ecology of human development as the scientific study of the progressive mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives. This process is viewed as affected by relations between these settings, and by the larger context in which the settings are embedded. Within the Bronfenbrenner framework there are four interlocking (i.e. bi-directional) and nested systems of development: (a) the microsystem, which encompasses the individual, (b) the mesosystem, which encompasses the family, school, peers, religious institutions, and so on, (c) the exosystem, which encompasses the extended family, neighborhood, media, and social services, and (d) the macrosystem, which includes the attitudes and ideologies of the culture.

When considering the influence of context on individual development, one cannot ignore the salience of the cultural context. Culture affects one's ideas and understanding about people, society, nature, and divinity, and influences one's behavior, family life, and social practices (Shweder et. al, 1997). As Bukowski and Sippola (1998) state: "Insofar

as they are already sensitive to the forces that derive from the person-environment interaction, developmental theory and research should be immediately receptive to the study of variations in human growth across cultures” (p.742).

Although culture may most often be thought of as a result of human behavior, it should also be regarded as a causal agent which shapes human behavior (Schneider, 1993). Relatively few components of individuals’ thoughts, emotions, and personalities are so intrinsic or fixed in advance that their developmental pathways cannot be changed through cultural participation. Human mental functioning, including social behavior, can be viewed as emerging from a combination of the symbolically mediated experiences, behavioral practices, and shared meanings of particular cultural communities (Shweder et. al, 1997). Thus, the cross-cultural study of social development provides an opportunity for powerful tests of the strength and generality of theory regarding both basic developmental processes and the origins of individual differences (Bukowski & Sippola, 1998).

In spite of what developmental theory and research has to gain from a cross-cultural perspective, research on culture as a source of human diversity has not yet had a clear presence within the developmental literature. Bukowski and Sippola (1998) have argued that the absence of a cross-cultural perspective in the developmental literature could be due to a lack of organizational schemes or guidelines to provide a structure for the cross-cultural study of development. One of the recommendations put forth by these authors is that cross-cultural researchers tie a particular phenomenon or process that varies across cultures to a particular developmental process. In the present research, this

approach is emphasized. The dimensions along which South and North American cultures differ (i.e individualism and collectivism) are used as conceptual points of departure for the study of social competence. Identifying the critical sources of variability in social competence across cultures allows for a greater understanding of the construct of social competence itself, and lends support to the notion that a cross-cultural perspective provides valuable information about developmental processes and individual differences.

When considering the influence of culture on individual development, it is important to also consider the ways in which within-culture differences may influence basic developmental processes. Subgroups, such as socioeconomic groups, exist within larger cultural groups and have their own sets of shared values, beliefs, and expectations. Individuals are likely to experience their membership in subgroups within larger cultural contexts as proximal influences on their thoughts, emotions, and behaviors. These social groupings may, in fact, be considered cultures within a culture. Although developmental research that examines differences between high- and low-SES children on certain outcomes does exist (see McCloyd, 1998 for a review), there is a paucity of research on how within-culture differences affect developmental *processes*. Moreover, the question of how cross-cultural and within-culture differences *interact* to affect both process and outcome remains largely unexplored. The present study, with its simultaneous examination of cross- and within-culture differences in the predictors and consequences of social competence, represents an advancement in research on individual-environment interactions.

The Construct of Social Competence

Definitions of social competence are as numerous as the number of researchers working in the area (Dodge, 1985). White (1959) conceptualized competence as an organism's orientation toward an efficient interaction with the environment. According to this view, competence is a form of motivation in and of itself, not merely a form of motivated behavior that serves other drives. This germinal conceptualization of competence influenced later operational definitions of the construct. These include the following: "the effectiveness or adequacy with which an individual is capable of responding to various problematic situations which confront him" (Goldfried & D'Zurilla, 1969, p.161); "an individual's everyday effectiveness in dealing with his environment" (Zigler, 1973); "a judgement by another that an individual has behaved effectively" (McFall, 1982, p.1); "attainment of relevant social goals in specified social contexts, using appropriate means and resulting in positive developmental outcomes" (Ford, 1982, p.324); the ability "to make use of environmental and personal resources to achieve a good developmental outcome" (Waters & Sroufe, 1983, p.81); and "the ability to engage effectively in complex interpersonal interaction and to use and understand people effectively" (Oppenheimer, 1989, p.45).

Bukowski, Rubin, and Parker (in press), have argued that social competence can be seen at multiple levels of social complexity - the individual, the dyad, and the group. According to these authors, the level of the individual refers to the behavioral, affective, and cognitive characteristics and dispositions that a child brings to a social interaction. The dyad level refers to interactions (a series of interchanges between individuals over a

limited time span) and relationships (cognitions, emotions, internalized expectations, and qualifications that relationships partners construct on the basis of their interactions with each other). The level of the group consists of experiences among a set of individuals who have been organized by either formal or informal means. Within this approach, social competence is viewed as an individual's capacity to achieve goals at the individual, dyadic, and group levels.

The conceptualizations of social competence listed above differ in terms of focus, but share a common theme of *effectiveness in social interactions*. Rose-Krasnor (1997) has pointed out that despite this general agreement that social success is a defining element of competence, consensus as to the nature of social competence breaks down at more specific levels of definition. She has identified four general types of operational definitions that have emerged in the literature: (a) specific skills; (b) sociometric status; (c) relationships; and (d) functional outcomes.

Within the social skills approach, social competence is conceptualized as either specific skills (e.g. perspective taking) or an entire set of hypothesized skills (e.g. interpersonal problem solving). For example, Hubbard and Coie (1994) consider such skills as emotion regulation and understanding of one's own emotions as comprising social competence. Cavell (1990) views social competence as a multilevel construct made up of three components: social adjustment, social performance, and social skills. His skills approach is quite comprehensive, including social cognitive and emotion regulation skills, as well as overt social behaviors.

One of the more difficult aspects of implementing a skills approach to the study of social competence is selecting the criteria (i.e. skills and behaviors) for competence. Researchers have employed a number of approaches to select the behaviors constituting social competence. The competence correlates strategy (Parke et. al, 1997; Pelligrini, Masten, Garnezy, & Ferrarese, 1987) is one in which behaviors are selected on the basis of correlations with other social competence indices. Other approaches have been the social values approach, in which specific socially desirable behaviors are targeted as comprising competence, and the normative approach, that uses age or class norms to identify competent behaviors (e.g. Rubin, 1982).

The social skills approach to social competence is problematic for a number of reasons. First, choosing the skills and behaviors that comprise competence is exceptionally difficult. Researchers who use social values to target competent behaviors run the risk of cultural bias, and those who rely on age or class norms may confuse what is normative with what is optimal or desirable (Rose-Krasnor, 1997). For example, Moffit (1993) has proposed that aggression increases in early adolescents in response to the “maturity gap” they experience at this time, in which they attain biological maturity in the absence of full adult status. Researchers relying on a normative skills approach to social competence must be careful to distinguish the aggression that they observe in early adolescents to be normative from the behaviors that would be optimal for these individuals. In addition, the social skills approach ignores the interactive nature (i.e. the dyadic and group aspects) of social competence by locating the construct within the individual. Finally, researchers using this approach to social competence have, as yet,

failed to acknowledge the possibility that children and adolescents may possess certain skills but fail to integrate or employ them successfully.

The sociometric approach to social competence (e.g. Dodge, 1985; Pelligrini, Masten, Garnezy, & Ferrarese, 1987) equates being liked or popular with peers with being socially competent. Sociometry has had a prominent place in the research literature on children's social development since Jacob Moreno (1934) introduced his model of sociometric judgement. According to Cillessen and Bukowski (2000), four general themes underlie this historical model: (1) a focus on two basic dimensions of judgement (attraction and repulsion); (2) a consideration of the perceiver (how one sees others) as well as the perceived; (3) a determination of multiple sociometric constructs; and (4) an emphasis on the dynamic nature of sociometric data. Although the applications of Moreno's ideas to the study of social relations has taken a variety of forms in empirical work (see Cillessen & Bukowski, 2000 for a complete review of this topic), current studies tend to rely on peer nominations and/or liking ratings to distinguish between rejected, neglected, and popular children. Bukowski and Hoza (1989) reviewed the literature on the measurement of children's popularity and concluded that both nomination procedures and rating scales are reliable and valid measures of children's peer status.

As Rose-Krasnor (1997) argues, the sociometric approach may be useful for identifying children who lack social competence, but it does not explain the nature or source of the child's difficulties. In addition, popularity may not always be the most desirable criterion of social competence. Recent research has demonstrated that

aggressive individuals are often perceived as popular within their peer group (e.g. Hawley, 2003; Prinstein & Cillessen, 2003; Rose, Swenson, & Waller, 2004).

Relationship approaches to social competence focus on a child or adolescent's ability to form positive relationships or friendships. Although this approach has the advantage of taking into account the transactional aspect of competence, there are potential difficulties as well. One problem with friendship measures of social competence is that children may form friendships without being globally competent in social interactions. Two socially rejected children may find each other and become involved in a relationship that involves companionship and mutual support, but the existence of the friendship should not imply social competence. Furthermore, there is as much disagreement about how to define and measure friendship as there is surrounding the definition of social competence (Hartup, 1996), introducing methodological difficulties when using friendship measures of social competence. Finally, although studies have consistently revealed a positive correlation between friendship quality and adaptive outcomes (Hartup, 1996), the causal direction of this relation remains questionable.

A functional approach to social competence is one in which specific social goals and tasks are identified within a specific context. The successful attainment of these goals is considered competence. However, this approach considers not just the outcomes of social behavior (i.e. goal attainment), but the processes underlying such outcomes. This conceptualization of social competence has spawned the development of process

models of competence, such as the information-processing model (Crick & Dodge, 1994; Dodge, 1986; Rubin & Rose-Krasnor, 1992).

One advantage to the functional approach to social competence is that it lends itself to the study of social competence across different cultures. Because functional approaches and process models are mostly concerned with social goals and the behaviors employed to attain these goals, they can be applied more easily to different cultures. Problems with the functional approach become apparent, however, when trying to determine success and failure in achieving the desired outcomes. Such judgements can only be made in the context of specific goals. However, an individual may have several and possibly conflicting goals in one situation. Rose-Krasnor (1997) provides the example of a child who wishes to stop another child from teasing her. If the child runs to the teacher for help, the teasing child may stop teasing for the moment but may be more likely to tease her in the future. Thus, it is possible for a child to meet short-term goals in a situation while compromising his or her potential to achieve a long-term goal.

Taken together, current conceptualizations of social competence are numerous and fraught with difficulties. Research in the area is currently conducted without a unified approach to or definition of social competence. Different conceptualizations of the construct lead to different data collection methods (e.g. peer reports versus observation) and different behaviors or tasks on which to focus. As a result, findings from research using one approach are not necessarily comparable to findings from research using another approach, thereby hindering progress in the field of social competence. Skills, peer status, relationship, and functional indices of social competence

have, in fact, been shown to be only moderately related to each other (Bukowski & Hoza, 1989; Parker & Asher, 1987).

Most models of social competence are also narrow in scope, especially as they typically tap into only one aspect of social competence at only one level of analysis. For example, the skills approach assesses the presence and absence of certain skills and behaviors and then infers competence or the lack thereof. Within this approach, more global indices of social competence (e.g. peer status) are rarely taken into account, and the level of analysis is strictly behavioral. The best models of social competence would incorporate multiple levels of analysis and unify different methods of assessment into one overarching scheme.

Although a few scholars have recognized the need to consider social competence in context (Combs & Slaby, 1977; Ogbu, 1981), the majority of work in the area has failed to acknowledge that social behavior and achievement of social outcomes are judged to be competent only according to the prevailing or dominant values and norms of the social environment in which the behavior is being performed (Topping, Bremner, & Holmes, 2000). Definitions and conceptualizations of social competence simply cannot ignore the contexts of situation, socioeconomic status or culture, as it is these contexts which give functional meaning to social skills, interactions, and outcomes.

The Social Competence Prism

Rose-Krasnor (1997) proposed a model of social competence that addresses some of the issues mentioned above. This model, entitled The Social Competence Prism, includes three general levels of analysis with a hierarchical relationship to each other. It

incorporates multiple aspects of competence, allows for different methods of assessment at different levels, and perhaps most importantly, allows for an examination of the effects of culture at each of the three levels.

The highest level of the Social Competence Prism is theoretical. Here, social competence is defined as “effectiveness in interaction” (p.119). Effectiveness is conceived of as the outcome of a system of behaviors, organized to meet both short- and long-term developmental goals. The middle level consists of summary indices of social competence, and reflects qualities of interactions, relationships, peer status, and social self-efficacy. This Index level is divided into two domains: (1) the *self* domain, consisting of aspects of social competence in which the individual’s own needs take priority (e.g. securing caretaker support), and (2) the *other* domain, which includes aspects of competence involving interpersonal connectedness. Both the Self and Other domains of the Social Competence Prism are segmented into “slices”, representing multiple social contexts. Socially competent behavior is expected to vary by context, and the range of contexts in which an individual is effective, in itself, is viewed as an important aspect of competence.

The base of the prism is the Skills level, which includes the social, emotional, and cognitive abilities and motivations associated with social competence. In contrast to the Index level, in which the elements are determined by transactions with others and thus have a social base, the elements contained within the Skills level reside within the individual. These motivations, behaviors, and skills are the building blocks of the relationships that are located in the middle (Index) level of the prism.

Rose-Krasnor's (1997) hierarchical "prism" model of social competence is a useful way of studying cultural variation as it distinguishes between the skills and behaviors that *contribute to* social competence, such as caring and academic achievement, and the *indicators of* social competence, such as being liked and having friends. Within this model, social skills are expected to predict social competence indices, and socially competent behavior is expected to vary by context. In the current study, how the relationship between social skills and behaviors and social competence indices varied as a function of culture and SES was examined. As such, the Social Competence Prism (Rose-Krasnor, 1997) served as an organizing framework for this investigation. Specifically, the conceptual point of departure for the study is the argument that social interactions, and thus social competencies, occur within overarching cultural contexts.

Social Competence From a Cross-Cultural Perspective

All social interactions, which are inextricably linked to the construct of social competence, occur within overarching cultural contexts. These contexts differ in terms of social values, relational patterns, and norms. The features of these contexts determine which characteristics and behaviors are socially appropriate and thus predictive of a child's ability to function within the peer group (Rubin, 1998). Therefore, the overarching sociocultural context is an important guide, essential for understanding the meaning of any individual's social behavior (Schneider, 1993).

According to Schneider (1993), considering the ways cultures vary is a promising way of developing hypotheses about the effects of culture on children's social competence. Theorists from various disciplines such as anthropology and cross-cultural

psychology have developed typologies of cultural variation (e.g. Hofstede, 1980; Triandis, 1989), which provide a basis for making predictions about effective social interaction. One of the more prevalent typologies of cultural variation is the extent to which cultures adhere to the worldviews of individualism or collectivism (Triandis, 2001). The individualism-collectivism dimension refers to the extent to which individuals are integrated with others and the social environment (Hui, 1988). At one end of the scale are those who define the self independently of groups and exist solely as “individuals”. At the other end are those who see the self as an aspect of a group, and who value interdependence, even to the extent of submerging the individual in the group. The first group can be labelled “individualists” and the latter group “collectivists” (Hui, 1988).

The distinction between individualistic and collectivistic societies serves to organize particular sets of values, beliefs, and behaviors into a more global framework (Dayan, Doyle, & Markiewicz, 2001). For example, in individualistic societies people are autonomous and independent from their in-groups; they give priority to their personal goals over the goals of their in-groups, and they behave primarily on the basis of their attitudes rather than the norms of their in-groups. In addition, exchange theory tends to predict their social behavior (Triandis, 2001). In contrast, members of collectivist cultures are interdependent within their in-groups, prioritizing in-group goals, shaping their behavior primarily on the basis of in-group norms, and behaving in a communal fashion (Triandis, 2001).

According to Oyserman, Coon, and Kimmelmeier (2002), the idea of contrasting cultures on the basis of differences in individualism and collectivism gained popularity in part due to the influential work of Geert Hofstede. Hofstede (1980) conducted a large-scale multinational survey of cultural values in which he assessed country-level individualism by focusing on workplace attitudes and behavior. He then reviewed possible causes and consequences of these job-relevant values for societies. Hofstede's model differed from previous work that focused on culture because it organized cultural differences into overarching patterns, thus facilitating comparative research and generating a growing body of cultural and cross-cultural research in subsequent decades.

In this large-scale multinational survey of cultural values, Hofstede (1980) found that countries such as Canada and the United States were among the most individualistic of nations, whereas the Latin American nations of Colombia and Venezuela were among the least. The latter countries were found to be more collectivist than their North American counterparts. A recent meta-analysis (Oyserman, Coon, & Kimmelmeier, 2002) compared Americans to individuals in eight regions on individualism and collectivism. As expected from Hofstede's (1980) work, Latin Americans were found to be more collectivist than their North American counterparts. However, Latin Americans (specifically those from Puerto Rico, Peru, Colombia, Chile, and Argentina) were also found to be more *individualistic* than Americans, directly contradicting Hofstede's (1980) findings. However, the stability of these findings are called into question due to the fact that, except for comparisons with Puerto Rico, these findings occurred for countries

represented by only one sample in the database. Thus, it is too early to draw the conclusion that Latin Americans are more individualistic than North Americans.

One type of research that has resulted from Hostede's work has focused on the psychological implications of individualism and collectivism. Recall that the core element of individualism is the assumption that individuals are independent of one another, whereas the core element of collectivism is the assumption that groups bind and mutually obligate individuals (Oyserman, Coon, & Kemmelmeier, 2002). From these core elements, a number of consequences and implications for human development and behavior can be posited. As Oyserman and colleagues explain, plausible consequences in terms of self-concept (e.g. Dhawan, Roseman, Naidu, Thapa, & Rettick, 1995), well-being (e.g. Diener, Diener, & Diener, 1995), attribution style (e.g. Al-Zahrani & Kaplowitz, 1993), and relationality (e.g. Freeberg & Stein, 1996) are easily discerned from the common definitions of individualism and collectivism.

In a similar vein, this study examined a psychological implication of individualism and collectivism. Thus, social competence was assessed from a cross-cultural perspective, with the assumption that differences in individualism and collectivism in the cultures sampled in the research would lead to differences in the predictors and consequences of social competence. If the values, beliefs, and goals of people within individualist and collectivist cultures differ, there are also likely to be differences among these cultures in the degree to which certain social skills and behaviors are considered desirable. For example, although helpful or caring behaviors are likely important contributors to indices of competence cross-culturally, it is expected

that they would be stronger predictors of mutual friendship and liking in cultures such as Colombia that emphasize the group over the individual. Similarly, socially withdrawn and avoidant behavior might be viewed as threatening to group cohesion in collectivist cultures, and may be an even stronger negative predictor of competence indices in collectivist culture (i.e. Colombia) than it is has been shown to be in individualistic cultures (i.e. Canada; Chen & Rubin, 1992). In contrast, academic achievement and leadership, skills and behaviors that promote individual success, are likely to be stronger predictors of competence indices in individualistic cultures like Canada. Moreover, a tendency to treat others fairly may be a stronger predictor of social success among members of individualistic cultures, as they tend to rely on exchange theory in their social interactions (i.e. balancing what is given and taken in relationships), in contrast to members of collectivist cultures that behave in a more communal fashion (Triandis, 2001).

Social Competence from a Within-Culture Perspective

Culture may be particularly salient when considering the influence of context on developmental processes, however, one would be remiss to ignore the influence of those contexts embedded within the overarching culture. One such context, socioeconomic status (SES), has received wide attention within the child development literature. Socioeconomic status is defined as the social and economic environment of an individual (Hauser, 1994), and has been conceptualized as being comprised of such variables as parental education and occupation, family income, and household structure (Entwisle & Astone, 1994; Hernandez, 1997). Although there remains considerable disagreement as

to the best way to conceptualize and measure SES (e.g., Entwistle & Astone, 1994; Hauser, 1994; Hernandez, 1997), both theoretical and empirical work has linked SES directly to such outcomes as health, psychological well-being, and the attainment of socially and culturally derived goals (Ensminger & Fothergill, 2003).

Individuals are embedded in multiple contexts at once, such as the family, school, and neighborhood. (Bronfenbrenner, 1986). Just as dimensions of culture are likely to dictate which social behaviors are valued in the peer context, aspects of a child's environment such as socioeconomic status can shape and define what is considered to be an antecedent of socially competent behavior. In a review of the literature on socioeconomic disadvantage and child development, McCloyd (1998) demonstrated that numerous studies with varied samples have reported a higher prevalence of emotional and behavioral problems (i.e. externalizing problems and aggression) among poor and low-SES children and adolescents than their middle class counterparts. Numerous mediating influences on the SES-externalizing problem relationship have been proposed, such as harsh parenting, the effects of chronic stressors, and parental dysphoria (Keegan-Eamon, 2001; McLeod & Nonnemaker, 2000). Parke and Buriel (1998) have suggested, however, that low-SES parents may adapt their parenting practices to suit their ecological conditions, and that aggressive behaviors are tolerated among poor families as a means of self-protection in "tough" environments. Although there is a great deal of evidence that aggression generally leads to peer rejection (see, for example, Coie & Dodge, 1998), it may be that the aggression-rejection relationship differs somewhat in different contexts. In a school comprised of low-SES children, from families that may socialize their

children to be more aggressive as a means of adapting to their surroundings, aggression may be a weaker predictor of peer rejection than in high-SES neighborhoods.

A similar argument can be made with respect to academic achievement. The finding that low-SES children perform significantly poorer than middle-class children on indicators of academic achievement (McCloyd, 1998) has been attributed to the amount of emotional support and cognitive stimulation in children's home environments (Korenman, Miller, & Sjaastad, 1995) and to variation in parental involvement (Eccles & Harold, 1993). However, it may also be that low-SES parents have different definitions of success, and different expectancies of the rewards of academic achievement than middle-class parents, based on their experiences and surroundings. Although academic achievement is generally positively associated with indices of competence such as peer status (e.g. Wentzel, 1991), it may be that among low-SES individuals, whose norms and values do not emphasize academic success, the relationship between school competence and friendship/liking is weaker than it is among high-SES individuals. Furthermore, it is possible that other skills, such as athleticism, are deemed desirable among peers in low-SES contexts, and would be stronger predictors of friendship and mutual liking among low-SES individuals than their high-SES counterparts.

Social Competence and Adjustment

According to the Rose-Krasnor (1997) model of social competence, measures such as liking and mutual friendship are indicators of whether or not a child is socially competent. The model posits that children who lack desirable characteristics and are unable to enact specific behaviors to interact effectively in their social contexts are more

likely to be rejected and friendless. Ample evidence exists to suggest that difficulties with peers place a child at risk for developing subsequent problems of a psychological nature (Rubin, Bukowski, & Parker, in press). For example, Parker and Asher (1993) investigated the links between friendship (distinguished from group acceptance), friendship quality, and feelings of loneliness and social dissatisfaction. Children without best friends were found to be more lonely than children with best friends, and the quality of the children's best friendships contributed separately to the prediction of loneliness. Rubin and colleagues followed a group of children from kindergarten to the ninth grade, and found evidence for a causal link between peer difficulties and emotional adjustment. They reported that passive-withdrawal in kindergarten and grade two predicted self-reported feelings of depression, loneliness, and negative self worth in the fifth and ninth grades (Hymel, Rubin, Rowden, & LeMare, 1990; Rubin, Chen, McDougall, Bowker, & McKinnon, 1995; Rubin & Mills, 1988).

Just as cultural context may be an important factor in determining what social skills and behaviors predict the social competence indices of friendship and peer liking, it may also be a contributing factor in determining whether these same indices predict emotional adjustment. The bulk of research reviewed above was conducted with North American samples. Although interpersonal relationships are certainly important in individualistic cultures, as evidenced by the dire consequences North American children suffer when there are difficulties in such relationships, the greater interdependence and integrity of in-groups in collectivist cultures likely places an even stronger emphasis on peer relations. If this is indeed the case, it would dictate that the relationship between

social competence indices and affective well-being (i.e. sadness and loneliness) will be stronger in collectivist cultures such as Colombia.

The Present Study

This comparative study of social competence in middle childhood, conducted in Montreal, Canada, and Barranquilla, Colombia, was designed to address the following questions: (1) how do culture and SES moderate the relationship between social skills and behaviors (e.g. caring, aggression, athleticism) and indicators of social competence (e.g. mutual friendship and liking)?, and (2) what is the role of social competence indices in determining a child's affective well-being, and how might this vary across and within cultures? Hypotheses were generated using Rose-Krasnor's (1997) model of social competence, which posits that variables located at the Skills level, such as caring, fairness, and athleticism, predict indicators of competence at the Index level, such as mutual friendship and liking (located within the Other domain of the Index level). Within this model, socially competent behavior is expected to vary by context.

In light of the differences between Canada and Colombia on the dimension of individualism/collectivism, it was hypothesized that culture would moderate the relationship between social skills and behaviors and indicators of social competence. Specifically, it was hypothesized that academic achievement, leadership skills, and fairness (skills and characteristics that are likely more desirable in individualist contexts) would be stronger positive predictors of social competence indices in Canada than in Colombia. Caring, helpful behaviors, which are likely more valued in a collectivist context, were expected to be stronger positive predictors of social competence indices in

Colombia than in Canada. Withdrawn, socially avoidant behaviors, which indicate an individual's wishes to withdraw from the group, were expected to be stronger negative predictors of social competence indices in Colombia than in Canada.

Given the different experiences, expectancies and values of low- and high-SES individuals, it was also hypothesized that SES would moderate the relationship between social skills and behaviors and social competence indices. Specifically, it was expected that academic achievement would be a stronger positive predictor of social competence indices among high-SES individuals than among low-SES individuals, but that athleticism would be a stronger positive predictor of social competence indices among low-SES individuals than among high-SES individuals. Moreover, it was hypothesized that aggression would be a stronger negative predictor of social competence indices among high-SES individuals than among low-SES individuals.

Finally, the dimensions along which cultures vary guided the hypotheses with regards to the relationship between social competence and adjustment. It was expected that social competence indices (liking and mutual friendship) would be stronger predictors of emotional adjustment (depressed affect) in Colombia than in Canada, due to the greater interdependence and integrity of in-groups in Colombian culture.

Method

Participants

Participants were 1067 children (592 girls) in grades 4, 5, and 6 from high- and low- SES neighborhood schools in Baranquilla, Colombia, and Montreal, Canada. The mean age for the sample was 10.26 years, with a range between 8 and 14 years. Ninety-eight percent of the sample fell between the ages of 9 and 12. Each school in Colombia was relatively homogeneous with regards to ethnicity, with high-SES schools comprised of students coming from European backgrounds and low-SES schools largely comprised of students coming from indigenous populations. In Montreal, the high-SES schools were comprised largely of students from European-Canadian backgrounds, whereas the low-SES schools were comprised of students from mixed ethnicities.

Procedure

Participants were assessed using a questionnaire designed to be completed in a one-hour session during class time. Recruitment procedures varied with location. In Montreal, once permission from the relevant school board and school principals was obtained, potential participants were met in their classrooms for a 10-12 minute information session about the nature and implications of the study, and were given letters of permission to be signed by parents (Appendix A). Of the potential participants available in the Montreal sample, 78% of the children participated. Concerns about parent literacy and a somewhat different school culture dictated a different recruitment procedure in Barranquilla. In Colombia, school principals routinely act in the place of parents – thus, permission for participation was obtained from the principals. Participants

were then informed of principles and procedures in their classrooms. With this recruitment procedure, a participation rate of approximately 100% was obtained (with the exception of children who were absent on the day of testing).

Participating students were administered the questionnaires in their homerooms using a group administration procedure. The participants completed a consent form (Appendix B), and paper and pencil measures designed to assess the following: (a) sociometric ratings, (b) same-sex and other-sex friendship nominations, and (c) characteristics of the other participating children in the class, as well as a series of measures unrelated to the purposes of this study. In Montreal, parents of the participants were sent a questionnaire assessing basic demographic information and socioeconomic status, and were provided with pre-paid envelopes to mail back their forms. A response rate of 60% was obtained for the parent questionnaires.

Translation of Measures

Colombian children participating in the study completed a Spanish version of the questionnaires. The original English version was given to school psychologists in Colombia, who assessed their meaning and relevance for Colombian children. The questionnaires were translated into Spanish by translators working in the fields of education and psychology, and then back-translated into English by a separate group of individuals to ensure that the meaning of items was retained in the translation.

Indices of Social Competence.

Bukowski and Hoza (1989) have argued that a full understanding of children's peer relations requires both measures of children's friendships and measures of peer

status (i.e. popularity). Thus, a measure of social competence, comprised of four scores, was derived from two sources: liking ratings and friendship nominations.

Liking ratings. Liking ratings were obtained to assess each child's degree of acceptance within the class (Appendix C). Participants were given a list of other participating children within the classroom, and were asked to rate each child on a 5-point Likert scale of liking ranging from not liking the person (1) to liking them very much (5). The ratings received by peers were averaged and then standardized within class and sex, yielding an average same-sex liking score and an average other-sex liking score for each participant. Ratings were standardized in order to make a common metric for all measures and to adjust for class size. The mean of the same- and other-sex liking scores was used as an overall average liking score for each child; for the 16% of participants in single-sex classrooms, only the average same-sex score was used. The overall mean liking score for same-sex peers in the sample was $M = 3.77$ ($SD = .67$); the overall mean liking score for other- sex peers was $M = 3.11$ ($SD = .84$).

Same- and other- sex friendship. Friendship was assessed in two ways. First, participants were given an alphabetized list of participating classmates. From this list, children were asked to write down, in decreasing order of preference, the names of the same-sex classmates and then the names of the other-sex classmates that they consider friends (Appendix D). Although six spaces for same- and other-sex friends respectively were provided, participants were instructed to complete as many or as few spaces as they desired. These nominations were used to determine whether each child had a same-sex friend, defined as a same-sex individual who was nominated as a best or second-best

friend. Other-sex friends were determined using the same method for other-sex friend nominations. The mean number of mutually-endorsed same-sex friends per child was $M = 2.51$ ($SD = 1.60$). The mean number of mutually endorsed other-sex friends per child was $M = .95$ ($SD = 1.39$). The mean of the number of same-sex and other-sex mutual friends was used as an overall mutual friendship score, except for those children in single-sex classrooms (for whom same-sex scores only were used).

A second measure of friendship was obtained from the liking ratings explained above. Using these ratings, a friend was defined as a same-sex individual who received the highest liking rating (“like very much”) from the children to whom they had given the highest liking rating. The same procedure was used with other-sex liking ratings. The mean number of mutually liked same-sex friends per child was $M = 3.37$ ($SD = 2.82$). The mean number of mutually liked other-sex friends per child was $M = 1.20$ ($SD = 1.54$). The mean of the number of mutually-liked same- and other-sex friends was used as an overall mutual liking score when both of these were available; same-sex scores were used for children in single-sex classrooms.

Nomination-based preference score. Measures of same- and other-sex peer preference were then created by subtracting the number of times the participant was rated with a 1 (not liked) from the number of received positive nominations from the friendship measure (explained above). Both of these scores had first been standardized within class and sex. The mean of the same- and other-sex preference scores were used as an overall average preference score for each participant when both scores were available. Recent evidence (Bukowski, Sippola, Hoza, & Newcomb, 2000) demonstrates there is

considerable overlap between nomination techniques and rating scales, indicating that these may be measuring the same phenomenon.

Social competence scale. To create a single composite score of social competence indices, the average liking scores, preference scores, and the two friendship measures (mutual friendship nominations and mutual liking nominations) were combined in a social competence scale ($\alpha = .85$). This scale was used as the dependent variable in all subsequent analyses. The reliability of this scale did not vary across the four groups that made up the sample (i.e., high- and low-SES children from Barranquilla and Montreal).

Social Skills and Behaviors

Peer assessment. Information on children's social skills, behaviors, and characteristics was obtained from selected items on a peer assessment procedure adapted from the revised "Class Play" (Masten, Morrison, & Pelligrini, 1985 ; see Appendix E). This peer nomination procedure has been found to be a valid and reliable measure of children's behavior and characteristics (Rubin, Bukowski, & Parker, in press). For each of the 33 items, participants were asked to nominate one or two same-sex and one or two other-sex classmates who best represent the item. For example, the child is asked to identify which person in his/her class is a good leader. Scores for each of the scales were determined from the mean number of nominations received from same- and other-sex classmates for each item of the scale. Mean scores for each scale were standardized within sex and classroom to control for differences in the number of male and female participants in each classroom. Finally, due to a percentage of participants (16%) who

were attending single-sex schools, a “cross-sex” score was computed for each scale that allowed each participant to be included in the analysis if they had received either same-sex or same- and other- sex nominations on the class play measure.

Combinations of items were used to create scales for the following variables of interest in this project: (1) academic achievement (“is smart and does well in school” and “always knows the right answer”; $\alpha = .94$) (2) leadership (“has good ideas for things to do”, and “is a good leader”; $\alpha = .77$), (3) social avoidance (“is shy”, “would rather play alone than with others”, and “are by themselves because they prefer to be”; $\alpha = .77$), (4) athleticism (“is a good athlete”, and “does well in sports”; $\alpha = .87$), (5) aggression (“is mean to others”, “hurts other people”, and “causes other people trouble”; $\alpha = .86$), (6) fairness (“plays fairly”, and “makes sure that everyone is treated equally”; $\alpha = .67$), and (7) caring (cares about others”, and “helps others when they need it”; $\alpha = .71$).

Culture

Participants were assigned culture scores based on whether they belonged to the Colombian or Canadian sample.

SES

Socioeconomic status was a key within-culture variable in the project. In Colombia, the schools recruited for the study were divided apriori according to SES, making assessment of this variable somewhat easier. In addition, “estrato” ratings, which are assigned by the Colombian government to its citizens to determine rates of taxation and benefits, were used to assist in measuring socioeconomic status. These estrato ratings, which are derived strictly from family income, range from 1 to 6, with 6 being

the highest socioeconomic rating (Stella-Lopez, personal communication, November 2002). Estrato ratings were obtained from school principals (who had them as part of the children's school records) for 62% of participants from the low-SES schools only. The overall mean estrato score for low-SES participants was $M = 2.52$, ($SD = .70$), confirming that the participants at the low-SES schools sampled were indeed within the lower socioeconomic strata. Although individual estrato ratings were not obtained from the high-SES school sampled in Barranquilla, school officials indicated that children who attend this school typically fall into the highest estrato category (6). Each child within the Colombian sample was assigned a SES score based on whether he/she attended the low- or high-SES schools.

Canadian schools recruited for this project were not as easily divided by SES, thus information about family income was obtained through the parent questionnaire (Appendix F). It is recognized that SES is a complex phenomenon involving income, education, and occupation (Entwisle & Astone, 1994; Hauser, 1994). This data, along with basic demographic information was collected for the purposes of a larger study, however family income was emphasized in this project so as to have comparable data in the Colombian and Canadian samples.

Parents who completed the questionnaire provided information about the income of each adult living in and contributing to the household. Respondent were asked to select the income level (from 10 choices of income levels ranging from below \$15, 000 to over \$95, 000) that was closest to that of each adult member of the household in the last year. For each family, a total income score was calculated by adding the income of each

family member. The mean income for the Montreal sample was $M = \$62,118$ ($SD = \$35,927$). A univariate analysis of variance was conducted to determine whether income varied as function of sex, grade, or school. A significant main effect of school ($F = 32.82$; $p = .000$) was found. Post hoc analyses indicated that participants from School 1 differed significantly in family income level ($M = \$36,027$; $SD = \$22,094$) from School 2 ($M = \$76,194$; $SD = \$36,481$) and School 3 ($M = \$68,400$; $SD = \$30,328$). There were no significant differences between the income levels of participants from School 2 and School 3. In addition, information obtained from Statistics Canada's 2001 census (Statistics Canada, 2003) indicates that the mean family income of participants from School 1 was considerably lower than the provincial average of $\$59,296$, whereas the mean family income of participants in the latter two schools was above the provincial average.

From the data obtained from the parent questionnaires and Statistics Canada, each participant was assigned a SES score based on whether they attended the low- or high-SES schools.

Depressed affect

Information on children's emotional adjustment (i.e. depressed affect) was obtained from the peer nomination measure (Appendix E) explained above. A combination of the items "is sad", "rarely feels happy", and "is lonely" were used to create a scale of depressed affect ($\alpha = .81$). This scale was used as the dependent variable in analyses aimed at examining how culture and SES moderate the relationship between social competence indices and adjustment.

Results

Hierarchical Linear Modeling

The data was analyzed via a multilevel modeling program (HLM; see Bryk & Raudenbush, 1992) that assesses the amount of variability that is due to particular sources, and determines whether some variables are more strongly associated with each other in some contexts than in others. Although HLM is commonly used to calculate individual growth trajectories using longitudinal data, it can also be used with concurrent data to examine whether the effects of individual-level variables differ across groups.

The current study sampled naturally formed groupings (i.e. neighborhood schools) to examine the contextual influences of culture and SES on the phenomenon of social competence. As Boyle and Willms (2001) argue, studies such as these result in complex data structures that are inherently hierarchical and measured responses that are not independent. Thus, conventional multivariate designs (e.g. linear regression) which assume the independence of observations cannot adequately address the hierarchical nature of the current data.

Associations calculated at the level of the individual are known within HLM as level 1 effects. At this level, one can determine whether effects are equal for all participants (i.e. it is a “fixed effect”), or if they vary across participants (i.e it is a “random” effect). One can then examine which group level variables (e.g. sex, culture) are the sources of variability of the associations at level 1. These effects are known as level 2 effects.

The structure of the data set, in which children are embedded within culture, SES, and sex, made multilevel modeling the analytic tool of choice. Using HLM (Bryk & Raudenbush, 1992), the data were analyzed in a two-stage process, with separate sets of analyses being conducted for the two main questions of the study. In the first set of analyses, the social competence score was used as the outcome measure, and the individual characteristic scores were used as predictors. In the second set of analyses, which examined the relationship between social competence and adjustment, the social competence score was a predictor, and depressed affect was the dependent measure. The moderators of culture, SES, and sex were used in both sets of analyses.

Preliminary Analyses

Tests of homogeneity of variance were conducted to assess whether the variability on the outcomes of social competence [$\chi^2 (7, N = 1067) = 4.23, p > .05$], and depressed affect [$\chi^2 (7, N = 1067) = 7.27, p > .05$] was equal across all groups. Results indicate that the assumption of homogeneity of variance was met for both outcomes of interest. The large sample size in this study dictated that the data set was likely robust against violations of assumptions of skew and kurtosis.

Pearson correlations were conducted among the study measures of social competence, social avoidance, athleticism, aggression, caring, academic achievement, leadership, fairness, and depressed affect. The correlations are found in Table 1.

Predictors of Social Competence

The first analyses examined the predictors of the indices of social competence. At level 1 in these analyses, the social competence score was used as the dependent measure

Table 1

Correlations Among Study Measures

Variables	1	2	3	4	5	6	7	8	9
1. Social Competence	--	-.36**	.38**	-.28**	.51**	.37**	.57**	.47**	-.39**
2. Social Avoidance		--	-.18**	.07*	-.09**	-.10**	-.20**	-.13**	.67**
3. Athleticism			--	.12**	.14**	.17**	.44**	.14**	-.25**
4. Aggression				--	-.25**	-.14**	-.04	-.22**	.03
5. Caring					--	.54**	.50**	.67**	-.06
6. Academic ach.						--	.63**	.58**	-.13**
7. Leadership							--	.54**	-.27**
8. Fairness								--	-.10**
9. Depressed Affect									--

** $p < .01$ * $p < .05$ $N = 986$

and the seven individual characteristics scores (i.e., social avoidance, athleticism, aggression, caring, academic achievement, leadership, and fairness/justice) were used as the predictors. Two types of effects were assessed at level 1, specifically the intercept, which was entered as a fixed effect, and the slopes for the association between the outcome variable and the individual characteristics scores, which were entered as random effects. The intercept refers to the expected value of the outcome variable when the predictors are equal to 0. (The intercept had been entered as a fixed effect because the scores that made up the variables had been standardized within sex and class, making the mean scores equal for each of the eight level 2 groups.) The slope in each analysis represents the index of the association between the predictor and the outcome. In other words, the slope indicates the change in the outcome for every unit of change in the predictor. The analysis of the level 2 model assessed the extent to which sex, SES, and culture and the two- and three-way interactions between them could account for variations in the slopes for the individual characteristics scores.

Significant effects at level 1 were observed for each of the seven variables (see Table 2). As a group, the predictors accounted for 54% of the variance in the social competence score. Effect size was defined throughout as the proportional decrease in the size of the sigma squared index. As individual predictors, the amount of variance that each accounted for varied from 7% for aggression, to 33% for leadership. When the variables were entered as a group, each accounted for unique portions of the variance in the outcome variables, though the amount each accounted for was smaller than when they

Table 2

Level 1 results regarding the association between the individual characteristic scores and the peer social competence score

Score	% of Variance Accounted For	Coefficient	<i>t</i>
Social Avoidance	14 / 5	-.42 / -.28	-9.22** / -7.84*
Athleticism	14 / 4	.39 / .19	12.99** / 6.37*
Aggression	7 / 4	-.31 / -.21	-9.44** / -5.01*
Caring	25 / 4	.59 / .28	20.24** / 2.68*
School	16 / 1	.35 / .09	6.91** / 2.06*
Lead	33 / 4	.64 / .34	52.08** / 7.78**
Justice	23 / 1	.56 / .11	23.68** / 5.09**

Note: The first number in each column represents the results from analyses in which the variables were entered as individual predictors. The second value in each column represents results from analyses in which the variables were entered as a group.

* $p < .05$; ** $p < .001$

were entered individually (see Table 2). In this case five of the predictors (i.e. social avoidance, athleticism, aggression, caring, and academic achievement) were observed to be random effects (see Table 2). Two of the predictors, leadership and fairness, were found to be fixed effects, meaning that they did not vary across individuals. Because they were fixed effects, these variables were not entered in the level 2 analyses.

The level 2 analyses examined the extent to which variability in the random slopes observed at level 1 could be attributed to culture, SES, and sex and to the two- and three-way interactions between them. Significant level 2 effects were found for all of the random effects observed at level 1 except for the academic achievement variable. For each of the random effects observed at level 1, the level 2 variables were able to explain at least 50% of the observed level 2 variability (i.e., variance measured by τ_{00}). Different patterns of level 2 effects were observed with four of the five random slopes observed at level 1. These effects were as follows: variation in the effect of social avoidance was accounted for by a two-way interaction between culture and sex (see Table 3); variation in the effect of athleticism was accounted for by a two-way interaction between SES and sex (see Table 4); variation in the effect of aggression was accounted for by a two-way interaction between culture and sex (see Table 5), and variation in the effect of caring was accounted for by a main effect for SES (see Table 6). Although, the effect of academic achievement on social competence was found to vary across groups, this variability was not accounted for by culture, sex, or SES.

Table 3

Level 1 Effect and Level 2 Effects for the Association Between Social Avoidance and Social Competence

Level	Variable	Coefficient	SE	<i>t</i>	<i>p</i>
1	slope for social avoidance	.54	-.09	6.03	.00
2	SES	-.59	.06	-9.98	.00
	culture	-.47	.06	-7.90	.00
	SES by culture	.28	.04	7.87	.00

Note: The intercept at level 1 was non-significant. All other level 2 effects were non-significant.

Table 4

Level 1 Effect and Level 2 Effects for the Association Between Athleticism and Social Competence

Level	Variable	Coefficient	SE	<i>t</i>	<i>p</i>
1	slope for athleticism	.98	.20	4.85	<.01
2	sex	-.30	.13	-2.25	<.10
	SES	-.38	.11	-3.51	<.10
	sex by SES	.19	.07	2.65	.05

Note: The intercept at level 1 was non-significant. All other level 2 effects were non-significant.

Table 5

Level 1 Effect and Level 2 Effects for the Association Between Aggression and Social Competence

Level	Variable	Coefficient	SE	<i>t</i>	<i>p</i>
1	slope for aggression	-.13	.09	-1.46	<.10
2	sex	-.24	.09	-2.67	.05
	culture	-.13	.06	-2.13	<.10
	sex by culture	.18	.07	2.88	.05

Note: The intercept at level 1 was non-significant. All other level 2 effects were non-significant.

Table 6

Level 1 Effect and Level 2 Effects for the Association Between Caring and Social Competence

Level	Variable	Coefficient	SE	t	p
1	slope for caring	.76	.05	16.64	.00
2	sex	-.02	.03	-.51	.64
	culture	-.03	.04	.82	.46
	SES	.13	.03	-3.87	<.05

Note: The intercept at level 1 was non-significant. All other level 2 effects were non-significant.

The pattern of findings revealed by these interactions is shown in Figures 1 to 4. Figure 1 shows that social avoidance was a stronger negative predictor of social competence among high-SES individuals than among low-SES individuals, especially among the children from Barranquilla. That is, social avoidance was most negative among high-SES Colombian children and the difference between the high- and low-SES children was stronger in Colombia than Canada. With regard to athleticism (see Figure 2), the pattern underlying the two-way interaction between SES and sex indicates that sex did not moderate the relationship between athleticism and peer social competence among high-SES children but that it did moderate this association for low-SES children. That is, beyond the overall positive relationship between athletic competence and peer competence, this association was strongest among low-SES boys. With respect to aggression (see Figure 3), aggression was a stronger negative predictor of social competence among boys than among girls, especially among the children in Montreal (see Figure 3). Thus, being aggressive appears to be even more detrimental to functioning with peers for boys in Canada than in Colombia. Finally, Figure 4 shows that there was an overall positive relationship between caring and the social competence indices but that this relationship was stronger in magnitude for low-SES individuals than for high SES boys and girls. Thus, an individual in a low-SES context who cares about others and helps people when they need it is more likely to have friends and be liked than an individual with these same social skills in a high-SES context.

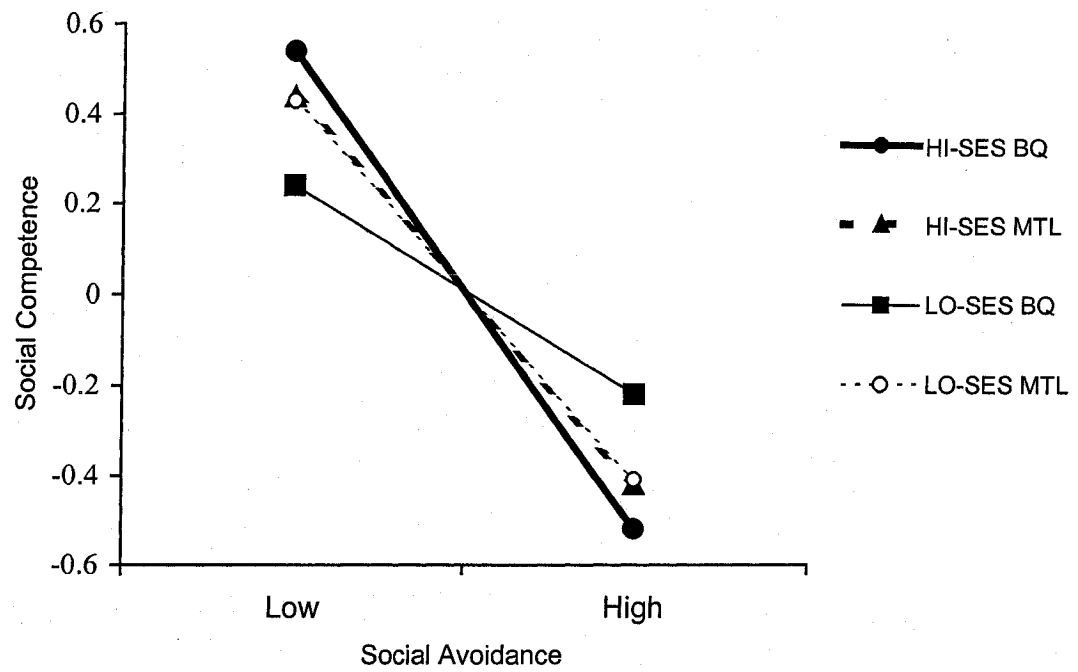


Figure 1. Predicted association between social avoidance and social competence indices as a function of the interaction between culture and SES.

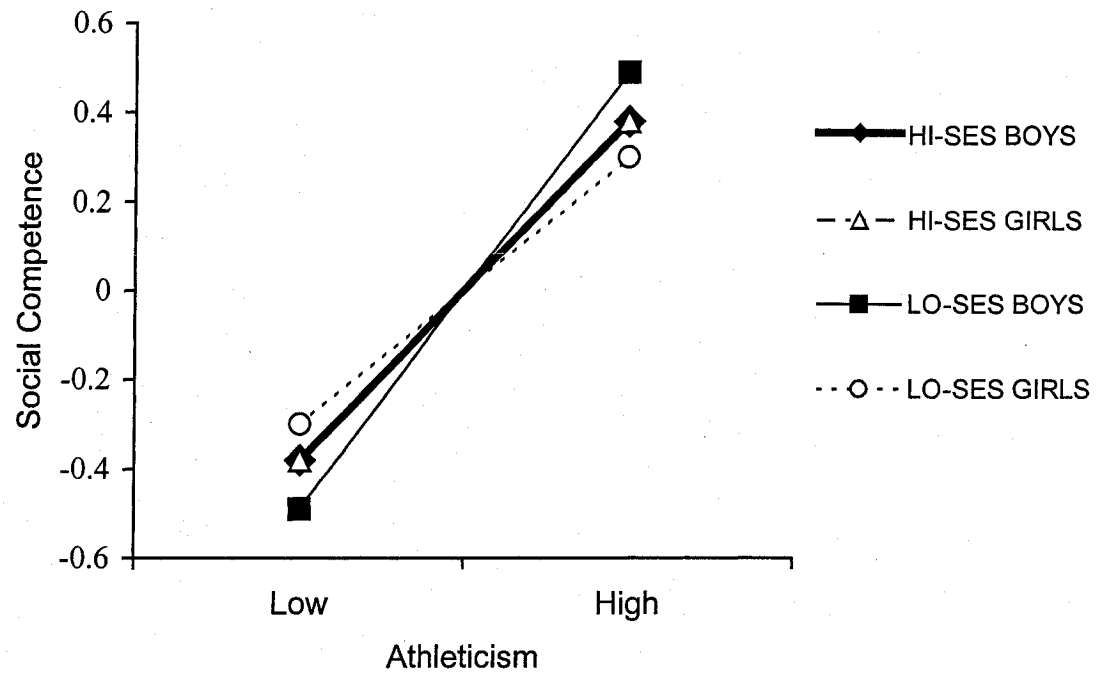


Figure 2. Predicted association between athleticism and social competence indices as a function of the interaction between sex and SES.

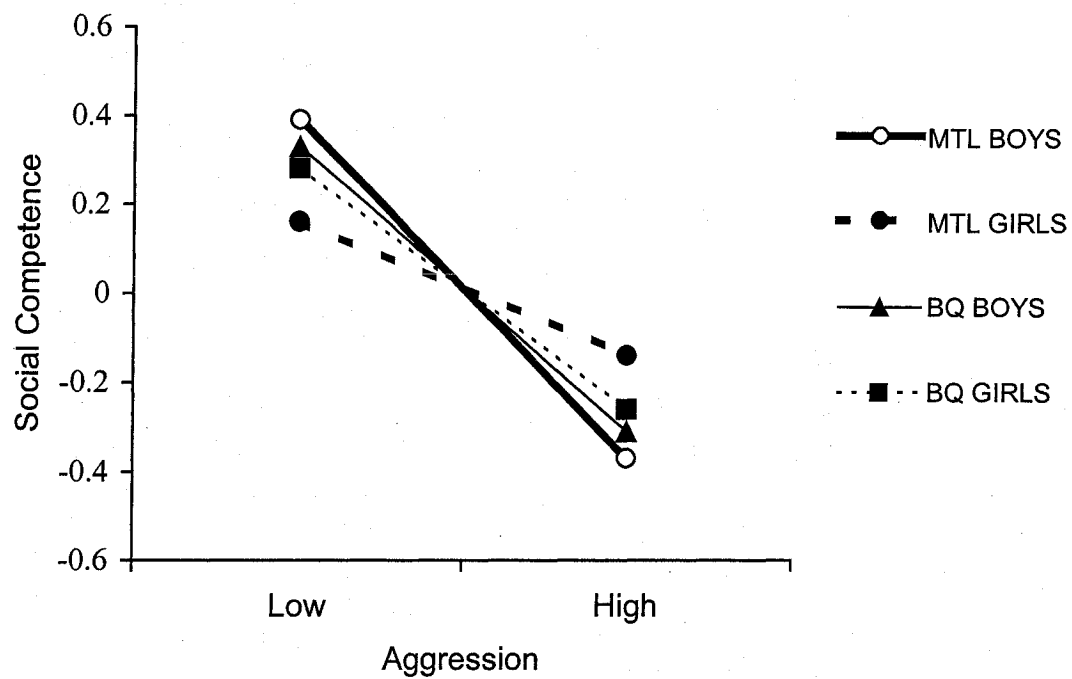


Figure 3. Predicted association between aggression and social competence indices as a function of the interaction between culture and sex.

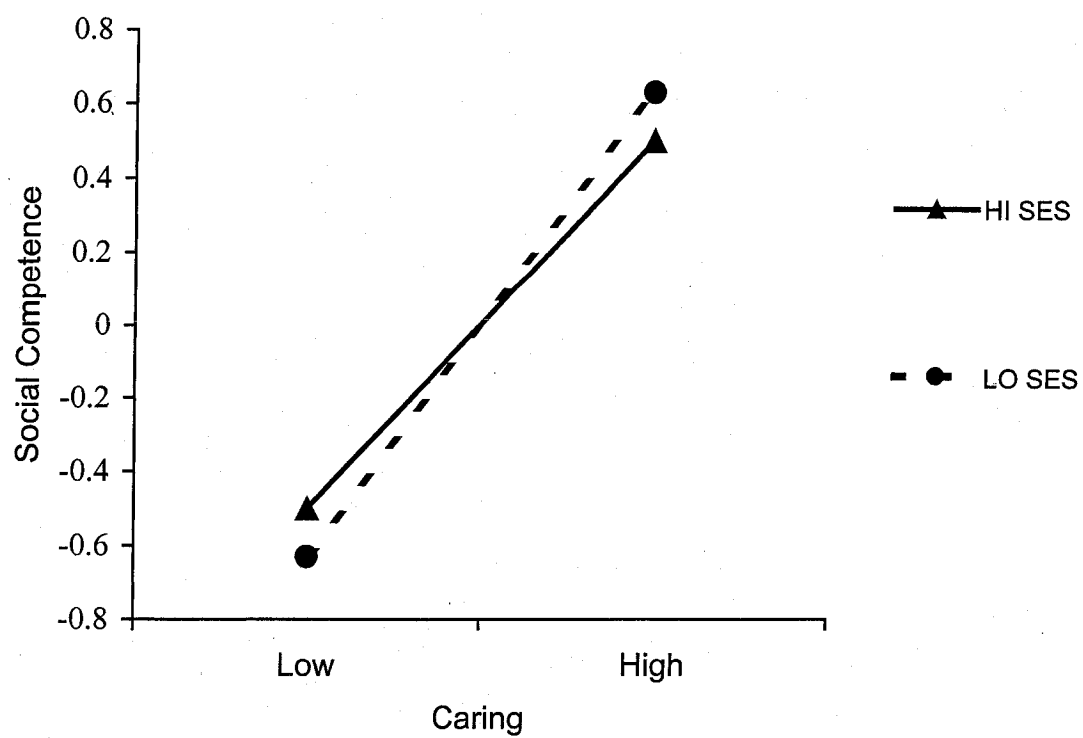


Figure 4. Predicted association between caring and social competence indices as a function of SES.

Social Competence and Affective Well-being

Multilevel modeling was also used to assess the association between social competence indices and the measure of affective well-being. In the level 1 analysis, the measure of depressed affect was used as the outcome measure and the measure of social competence was used as the predictor. As in the previous analyses, the level 2 predictors were culture, SES, and sex and the two- and three-way interactions between them. The level 1 results indicated that the social competence measure was a significant predictor of the measure of depressed affect (coefficient = $-.36$, $t = -5.61$, $p < .001$) and that it accounted for 18% of the level 1 variance in well-being. The effect of the social competence variable was observed to be a random effect. The level 2 analysis showed that variability in the effect of the social competence variable on depressed affect was attributable to culture (coefficient = $-.29$, $t = -10.67$, $p < .001$), SES (coefficient = $-.41$, $t = -17.79$, $p < .001$), sex (coefficient = $-.07$, $t = -4.99$, $p < .001$), and the three-way interaction between these variables (coefficient = $.06$, $t = 8.50.99$, $p < .001$). A clarification of this interaction (see Figure 5) indicates that social competence is a stronger negative predictor of depressed affect for high-SES individuals than for low-SES individuals, and for girls over boys. Moreover, among high-SES individuals, the relationship between social competence indices and depressed affect is stronger among those from Colombia than among those from Canada. Thus, the consequences of poor social status for emotional well-being are most dire among high-SES girls from Colombia.

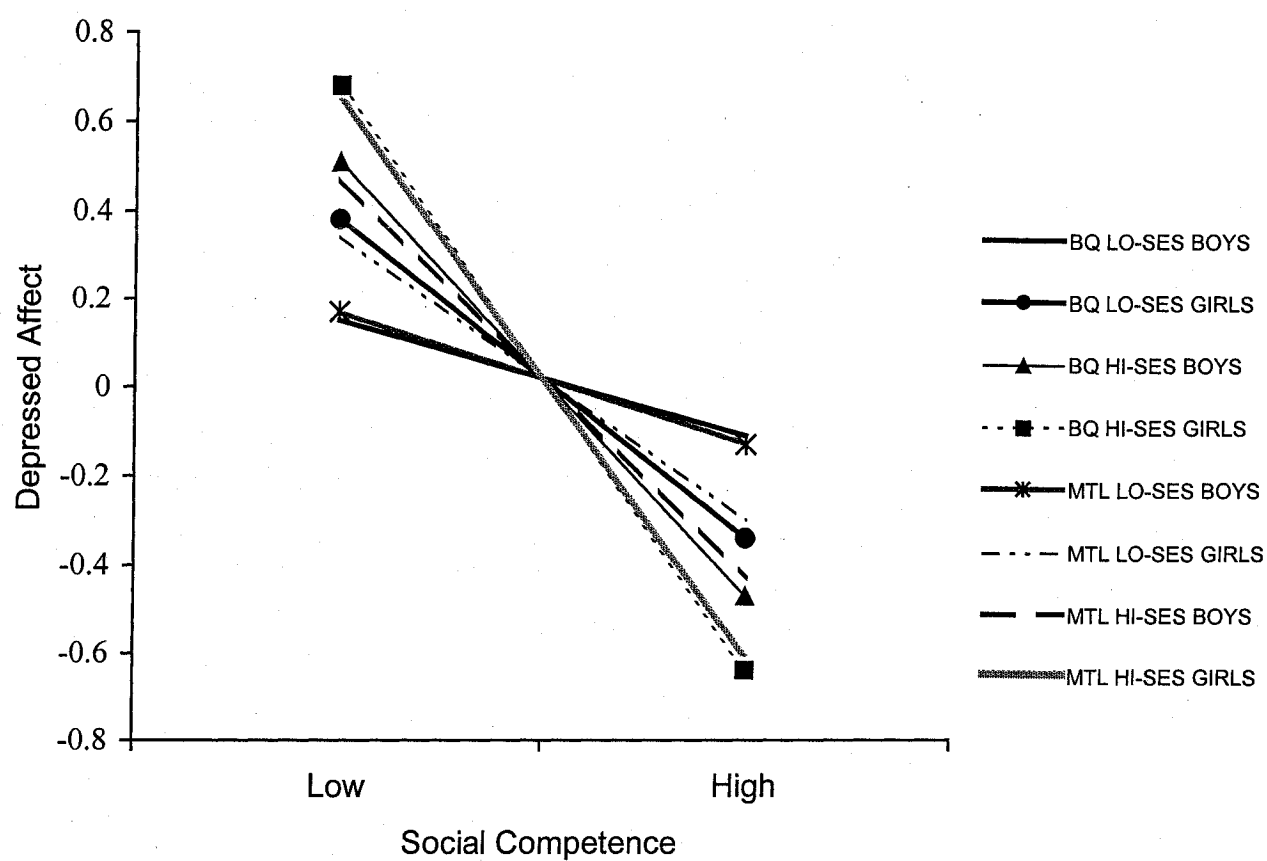


Figure 5. Predicted association between social competence indices and depressed affect as a function of the interaction between culture, sex, and SES.

Discussion

The goals of this comparative study of social competence in middle childhood were to address two important questions while being rooted in theory and making use of innovative statistical techniques. First, how do culture and SES moderate the relations between social skills/individual characteristics and indicators of social competence? Second, what is the role of social competence in determining a child's emotional adjustment, and how might this vary across and between cultures? These questions were generated using Rose-Krasnor's (1997) prism model of social competence, in which the construct of social competence is conceptualized as having three levels with a hierarchical relationship to each other. The design of the current study was chosen in order to test Rose-Krasnor's theory that variables located at the Skills level of the prism predict indicators of competence at the Index level. Moreover, the focus on culture and context within the study reflected the situation-specific nature of social competence within this model. The use of hierarchical linear modeling techniques capitalized on the hierarchical structure of the data set and facilitated the exploration of the main questions of the investigation.

The findings from this study show clearly that the strength of the associations between individual characteristics and social competence indices among older school-age children varies across SES, culture, and sex in complex ways. Moreover, the association between children's social functioning with peers and their affective adjustment varies as a function of interactions between sex, culture, and SES. These findings demonstrate that one cannot make undifferentiated claims about the factors that are linked to social

competence, but rather must recognize contextual variations. Just as importantly, it appears that one cannot make monolithic claims about the effects of competent functioning with peers. Indeed, the apparent effect of functioning competently within the peer group on affective well-being appears to vary substantially across contexts.

Specific hypotheses concerning the moderating effects of culture on the relation between social skills and characteristics and the social competence composite score were made. Based on ideas regarding the differential functioning of cultures according to the dimensions of individualism and collectivism (Hofstede, 1980; Hui, 1988; Schneider, 1993; Triandis, 1989, 2001; Triandis & Brislin, 1984.), it was hypothesized that academic achievement, leadership skills, and fairness (skills that are likely more desirable in individualist contexts) would be stronger positive predictors of social competence indices in Canada than in Colombia. Caring, helpful behaviors, which are likely to be more valued in a collectivist context, were expected to be positive predictors of social competence indices in Colombia than in Canada. In contrast, social avoidance was expected to be a stronger negative predictor of social competence indices in the collectivist culture of Colombia than in Canada. In recognition of the potential for within-culture variability, it was also hypothesized that SES would moderate the following associations between individual characteristics and social competence indices: Academic achievement was expected to be a stronger positive predictor of social competence indices among high-SES than among low-SES individuals, athleticism was hypothesized to be a stronger positive predictor of social competence among low-SES than high-SES individuals, and aggression was expected to be a stronger negative

predictor of social competence indices among high-SES than low-SES individuals.

Overall it should be noted that although many of the hypotheses proposed received at least partial support, there was a remarkable absence of findings indicating an unqualified effect of cultural context. This lack of main effects of culture is a critical feature of the findings from this project, and indicates a need to consider how the larger cultural context interacts with the other contexts subsumed within it.

Seven individual characteristic scores (i.e. social avoidance, athleticism, aggression, caring, academic achievement, leadership, and fairness) were used as predictors of social competence. Of these, leadership and fairness were found to be a fixed effect, meaning that the effect for this variable on social competence was equal for all participants. Academic achievement was found to vary across the eight groups used in the analyses, however, this variability was not accounted for by the level 2 effects of culture, SES or sex.

As for the remaining individual variables, perhaps the most striking finding from the study is the remarkable within- and between-culture variability in the strength of the association between social avoidance and social competence indices. It was hypothesized that withdrawn, socially avoidant behaviors, which indicate an individual's wishes to withdraw from the group, would be stronger negative predictors of social competence indices in Colombia (a more collectivist context) than in Canada. The findings indicated that cross-cultural *and* within-culture differences were important in predicting the relation between social avoidance and social competence. Overall, social avoidance was a stronger negative predictor of social competence among high-SES individuals than low-

SES individuals, but this negative relationship was stronger among high-SES individuals in Barranquilla than among their Canadian counterparts.

While social avoidance is characterized by a tendency to withdraw from the group, sociable individuals tend to approach others, take initiative, and be active in social situations. The finding that social avoidance negatively predicted social competence more strongly among high-SES children than among low-SES children may be related to the role of agency, (i.e. an instrumental orientation that connotes assertion) within high-status groups. In addition to findings that high status individuals are *perceived* by others to be more agentic (e.g. Conway, Pizzmagilio, & Mount, 1996) than low-status individuals, there is some evidence that indicates *actual* differences in agentic qualities among high- and low-status individuals. Mirowsky, Ross, and Willigan (1996) analyzed the effects of socioeconomic status on instrumentalism, which was defined as a belief in individual agency, and efficacy. In their sample, higher education and income were associated with individuals' beliefs that one controls one's own life. Similarly, Snibbe and Markus (2005) examined models of agency among adults of different educational backgrounds. It was found that more educated individuals had qualitatively different cognitive models of agency than less educated individuals, such that the former emphasized their control over their environments whereas the latter emphasized maintaining integrity and resisting influence. Although the aforementioned research was conducted with North American adults only, it points to the likelihood that high-SES individuals are socialized to value entrepreneurial qualities such as agency and initiative, and would therefore prefer peers who actively engage in the peer group. Thus, shy,

withdrawn peers who are not active group participants in high-SES groups are less likely to be liked and have friends. This negative relationship between social avoidance and indices of social competence that exists among high-SES individuals was observed to be especially strong in Colombia, a culture that may further emphasize the critical importance of sociability due to its emphasis on collectivism.

The importance of considering within-culture differences was also highlighted by the findings for athleticism. It was expected that athleticism would be a stronger positive predictor of social competence indices among low-SES individuals than among high-SES individuals, due to differences in the values, experiences, and expectancies of these two groups. The association between these variables was moderated by an interaction between sex and SES. There were no sex differences in this relationship among high-SES children, however, among low-SES children, the relationship between sports and social competence was stronger among boys than among girls.

One possible explanation for these results is that, in addition to differences in values and expectations of success, the low- and high-SES groups also differ in terms of their adherence to traditional sex roles or gender role orientation, such that boys are expected to be strong and athletic, while girls are expected to engage in less active types of activities. Koivula (1999) has found modifying effects of gender typing on adults' sports participation, with more gender-typed males participating in sports activities than gender-typed females. Similarly, Wann, Wadill, and Dunham (2002; see also Wann & Wadill, 2003) found that gender role orientation was related to sport fandom, with those high in masculinity reporting higher interest and valuing of sports. It may be that action-

based aspects of sex roles are somewhat more rigid among low-SES groups, so that athleticism is more highly valued among low-SES boys than among low-SES girls and high-SES individuals of both sexes. The effect of adherence to sex roles on peer group functioning, especially as it varies across cultures, deserves further study.

Sex differences also played a role in the relation between aggression and social competence indices. This association was moderated by the interaction between culture and sex. Overall, aggression was a stronger negative predictor of social competence indices among boys than girls. It appears that among girls, being mean and hurting others may not be as detrimental to their social status as it is for boys. This may be due to the fact that boys and girls tend to engage in different forms of aggression (e.g. relational vs. physical; Crick, 1997) which could have different consequences for their social status (Werner & Crick, 2004). The items used in the current study (“is mean to others”, “hurts other people”, and “causes other people trouble”) were intended to be general aggression items, but may have captured physical or direct aggression more effectively than relational forms of aggression (e.g. spreading rumors, excluding someone from the group). This methodological issue could explain the different findings for boys and girls in terms of the relation between aggression and indices of social competence. A future direction for this research would be to examine different types of aggression and how the associations between these forms of aggression and the measure of social competence vary across boys and girls.

Interestingly, the negative association between aggression and the competence composite score was even stronger among boys from Montreal than among boys from

Barranquilla. Thus, being aggressive appears to be even more detrimental to functioning with peers for boys in Canada than in Colombia. It may be that the collectivist culture of Colombia, which places great emphasis on groups, dictates a somewhat higher tolerance of negative behaviors before one is excluded from the peer system. That is, being part of the group, even as an aggressive member, may be so important in a collectivistic society that one's disruptive presence can be tolerated so long as one remains a group participant. Alternatively, the Colombian context, known for its frequent appearance of violence (García Márquez, 1998) may make aggression more normative and less threatening to competent social functioning.

SES alone moderated the relationship between caring and social competence indices. Although it was hypothesized that caring would be more highly valued in the more collective culture of Colombia, we found that it was the context of socioeconomic status that mattered in the relationship between caring and friendship/liking. Although there was a positive overall relationship between caring and social competence indices, this relationship was stronger among low-SES children. It may be that for individuals living in the stressful context of poverty, caring and helpfulness are more necessary and more valued qualities in one's friends. McLoyd and Wilson (1990; 1993) have suggested that the stressful contexts of low-SES neighborhoods influence the degree to which mothers seek emotional support from their children; this may in turn teach low-SES children both the value of and the means to performing caring and helpful behaviors.

It should be noted that SES acted as a moderator, either alone or in an interaction with another level 2 variable, in three of the four associations between individual

characteristics and the social competence composite score described above. Thus socioeconomic status had a stronger moderating effect than either culture or sex. Each of these variables acted as moderators *only in interaction* with another level 2 variable, and moderated only two of the four associations between individual characteristics and social competence indices.

The lack of a main effect of culture was also evident in the findings regarding the association between competent functioning and emotional adjustment. The second main question in this project was how the relation between social competence indices and emotional adjustment (i.e. lack of depressed affect) varied as a function of context. It was expected that social competence indices (liking and mutual friendship) would be stronger predictors of depressed affect in Colombia than in Canada, due to the greater interdependence and integrity of in-groups in Colombian culture. However, a three-way interaction between sex, culture, and SES moderated the relationship between friendship/liking and depressed affect. Overall, social competence indices were stronger negative predictors of depressed affect among high-SES individuals than among low-SES individuals, and among girls rather than boys. Among high-SES individuals, it appeared that those from Colombia experience a greater degree of depressed affect when their social status was poor. Thus the strongest relationship between friendship/liking and emotional adjustment was found among high-SES girls in Barranquilla. It may be that for upper-middle class girls and women, one's sense overall competence and self-worth is related to, or even defined by, one's ability to function within a social network. Thus, their self-concept is somewhat rigidly tied to their place within the peer network.

Accordingly, the negative affective consequences of not functioning well within a social network may be more severe for high-SES girls than for other boys and girls. One question that could not be answered within this cross-sectional data set is whether this strong association between social competence indices and affective adjustment changes over time. It may be that for upper-SES girls, especially in collectivist cultures, early adolescence is a time in which self-concept is very highly dependent on one's peer status. Future longitudinal research could address whether emotional well-being is related less strongly to social functioning for girls in later adolescence, and may identify whether boys experience a similar period of heightened emphasis on social competence at a different developmental stage.

What emerges from the pattern of findings from the two sets of analyses in this investigation is the strong influence of socioeconomic status in determining what social skills and characteristics are considered valuable and desirable in one's peer group. Moreover, it is clear that in the present study, the role of SES was larger than the role of culture. The implications of these findings for the study of culture and development are numerous.

Bronfenbrenner (1986) conceptualized one's environment to include both proximal and distal contexts, with one's family and neighborhood a more proximal context than the overarching culture. Although cultural values and beliefs are surely transmitted through the proximal contexts, it may be that the factors that exist in one's family and neighborhood (e.g. poverty, stress, parenting style, models of success and failure) are more salient and thus more influential in determining one's social values than

are the larger cultural beliefs and practices. This may be even more true for young children, who are more deeply immersed than adults in proximal contexts such as family and school, and who may still be developing an awareness of larger cultural beliefs. The question of whether there are developmental differences in the effects of culture, SES, and sex should be addressed in future work. A second implication of the findings is that the definition of culture may need to be defined more broadly, so as to include socioeconomic status and gender under the rubric of “culture”. Most importantly, whereas the findings provide further support for Oyserman et al.’s (2002) contention that a reconsideration of the concepts of individualism and collectivism is needed, the current results indicate that an important part of this reconsideration is to assess how these concepts manifest themselves in different contexts such as in high and low SES groups.

An alternative explanation for the lack of main effects of culture is methodological in nature. A plausible criticism of this project is that the hypotheses and findings are tied to differences in individualism and collectivism across the cultures of interest, yet the variables of individualism and collectivism have not been directly assessed. Thus, within the current project, levels of individualism and collectivism are assumed to differ in Colombia and Canada, based on knowledge obtained from Hofstede’s (1980) cross-cultural investigations.

Oyserman and colleagues (2002) have argued that research that *assumes* the levels of individualism and collectivism in its comparison groups may be vulnerable to criticism due to the lack of empirical support for the assumptions. However, these authors note that other approaches have limitations as well. A common approach is to

measure individualism and collectivism at the level of the individual and correlate this assessment with individual outcomes. However, as Oyserman et. al (2002) explain, the direct assessment approach “assumes that cultural frame is a form of declarative knowledge (e.g. attitudes, values, and beliefs) that respondents can report on rather than some set of more subtle and implicit practices and social structures that respondents cannot report on because these practices are deeply woven into everyday life and are a normal part of living” (pp.7). Moreover, the direct-assessment approach assumes cross-cultural convergence in the meaning assigned to both the questions and the response choices in common individualism-collectivism rating scales.

It should be noted that, despite the limitations of a direct assessment approach, individual individualism-collectivism ratings, adapted from Hui’s (1988) INDCOL scale, were collected as part of a larger project (Appendix G). However, were these ratings to be included in the current analyses (as level 2 variables), results would have been confounded due to the high correlations between the individualism-collectivism ratings and the variables of culture and SES (See Appendix H for mean differences on this rating scale). Thus, it made more sense to use the dimensions of individualism and collectivism in the prediction and interpretation of the study’s findings rather than as variables of interest within the project.

The strong findings with regards to socioeconomic status are particularly interesting when one considers some of the limitations in this study as to the way in which the SES of participants was assessed. There is considerable disagreement within the literature as to the best way to assess SES. Entwistle and Astone (1994) have

recommended collecting separate indicators of financial (i.e. income), human (i.e. parental education and occupation), and social (i.e. household and family structure) capital. Hauser (1994) has suggested gathering information about the major adult earner in the household in order to ascertain his/her education, labor force status, and occupational position. Hernandez (1997) has argued that researchers should ask participants standard census questions in order to compare information on household composition, family income, educational attainment, race and ethnicity, and employment, with national population data.

In the current project, family income was used as the indicator of SES in both samples. Due to concerns about parent literacy in Colombia, it was decided that information regarding SES should be obtained through the “estrato” ratings provided by the school principals rather than through a parent questionnaire. As noted above, these ratings are derived strictly from family income. Data about parents’ occupations, education, and household structure was available for a portion of the Canadian sample, however, family income alone was emphasized in this project so as to have comparable data across samples. Although the choice to use family income as a variable of interest in this study was made for primarily practical reasons, there is some support in the literature for examining family income alone in developmental studies. Bornstein, Hahn, Suwalsky, and Haynes (2003) have argued that the components of SES such as education, occupation, and income should be used separately in analyses rather than combined in one scale. Furthermore, Duncan, Brooks-Gunn, and Klebanov (1994) found that family income and poverty status were powerful correlates of child outcomes, even

after accounting for differences in family structure and maternal schooling between low- and high-income families.

Another concern when examining SES variables in a cross-cultural study is whether the high- and low-SES groups in both samples are equivalent. Certainly, there are some differences in the social and economic structures of Canada and Colombia that result in differences in socioeconomic groups. For example, it is likely that the low-SES children in the Colombian sample of this study have fewer financial resources than the low-SES children in the Canadian sample. However, it may be that one's relative position within society might be more important than absolute income. Thus, the experience of having less than others around them may be the same for Colombian children and Canadian children despite the fact that the actual amount of resources that they have may differ. Moreover, the findings of the current project confirm that in many cases high and low-SES groups in the two samples look more alike than the two samples overall. For example, the findings for the predictors of athleticism and caring indicated patterns among SES groups that occurred regardless of culture.

In sum, the goal of addressing questions as to the moderating effects of culture, SES and sex in the prediction of social competence and emotional adjustment appears to have been met in this study. Moreover, the analyses yielded richer and more complex results than originally hypothesized, illuminating the underlying features of social competence and the way that this developmental process is shaped and defined by contextual factors.

The Social Competence Prism Revisited

A further goal was to anchor the project within a theoretical framework, specifically Rose-Krasnor's (1997) prism model of social competence. Although it is more difficult to evaluate whether this goal was met, it is important to review how the study was organized according to the model and whether our findings provide support for Rose-Krasnor's theoretical framework. As explained above, Rose-Krasnor's Social Competence Prism (1997) contains three levels with a hierarchical relationship to each other. The topmost level is theoretical, and defines social competence as effectiveness in interaction. The current project focused on the two lower levels of the Prism. The middle, Index level consists of indicators that an individual is socially competent. Although Rose-Krasnor (1997) emphasized the need to consider indices within both the self (e.g. feelings of self-efficacy, self-esteem) and other domains (social status, healthy relationships), so as to acknowledge the importance of both of these domains in adjustment, the indices utilized in this study (liking and mutual friendship) fell within the Other domain only. The base level of the prism, the Skills level, includes the behaviors, motivations, and abilities that serve as the base for the higher levels. The individual characteristics studied in this project (social avoidance, academic achievement, leadership, caring, fairness, athleticism, and aggression) were construed as fitting in with this conceptualization of social skills.

Within the Social Competence Prism (Rose-Krasnor, 1997), skills and motivations at the bottom section of the Prism are expected to predict the social competence measures at the Index level. This notion was reflected in the design of the

analyses of the project, which predicted social competence indices from the aforementioned individual characteristics and social skills. The examination of the moderating effects of culture and context stemmed directly from the conceptualization of social competence as a context-dependent construct that is inherent within the prism model.

The finding that the individual characteristics predicted the measure of social competence indicators provides support for the construal of social competence as a multi-level construct. Moreover, the fact that the associations varied as a function of culture, SES, and sex provides evidence for the context-specific nature of social competence. Thus, despite the fact that the measures were limited to only some aspects of Rose-Krasnor's (1997) model, the results from this study provide some preliminary support for the Social Competence Prism. A review of the literature revealed no direct tests of this model. Thus, the current project makes a contribution as an empirical test of an important theory of social competence.

The future directions for researching social competence within the Prism Model are numerous. To begin, it will be important to include both the Self and Other domains as indices of competence in future investigations, as is suggested by the model, so as to better reflect the importance of integrating autonomy and connectedness in one's social interactions. Another important avenue for research within this model is the examination of developmental differences in social competence. As developmental stage can be considered a unique context, it would be enlightening to examine how the associations

between social skills and social competence indices vary as a function of age or developmental stage.

The findings of the current project demonstrate the importance of considering social competence in context, and provide preliminary support for a hierarchical model of social competence. The results have implications not only for understanding the phenomenon of social competence itself, but for developing interventions aimed at improving social competence in children.

Implications for Intervention

Social skills programs have gained considerable popularity in the last two decades as interventions for children with a wide range of difficulties such as peer rejection and bullying (e.g. DeRosier, 2004), and disorders such as ADHD (e.g. Tutty, Gephart, & Wurzbacher, 2003), Autism Spectrum Disorders (e.g. Barry et. al, 2003), and social anxiety (e.g. Beidel, Turner, & Morris, 2000). Although approaches vary, the majority of programs are designed to identify social skill deficits, and promote skill acquisition and performance as a means to improving children's social competence. Although a minority of programs have emphasized the importance of context in social skills training (e.g. Dygdon, 1993; Sheridan, Hunglemann, & Maughn, 1999) findings from the current research points to the need for the development of programs that promote social behavior that is operative in the natural environments in which participants live. For example, based on our findings that athleticism is a stronger predictor of mutual friendship and liking among low-SES boys than either low-SES girls or high-SES children, a context-

sensitive intervention could include sports activities as one component of a social skills program for boys in low-SES neighborhoods.

In addition, the importance of context in the promotion of social competence might have specific implications for clinicians working with immigrant populations. An important part of this work with immigrant children and families may involve investigating the social behaviors that are valued in their culture of origin and helping them understand the cultural values of their adopted country, and how they relate to social behavior.

Another way that this study points to avenues for intervention is through its support of the Prism Model (Rose-Krasnor, 1997) of social competence. With further research and testing, the Social Competence Prism may be a useful model for assessment and intervention. Rose-Krasnor (1997) suggested that those assessing individuals with social difficulties should use a multi-step, top-down method of assessment. These procedures would include determining, based on contextual and developmental factors, which measures at the Index level constitute evidence of social success. Using selected measures, a profile of an individual's strengths and weaknesses in the selected indices could be constructed, allowing for the identification of those in need of intervention. Interventions would then be conducted within the Skills Level, and would be based on training the skills, behaviors, and motivations that are best linked to the selected competence indices. Rose-Krasnor (1997) emphasizes that within this framework, competence assessments and interventions must be culturally and situationally diverse.

Overall, this study points to the need for psychologists and mental health workers to understand culture and ethnicity factors in order to provide appropriate psychological services. As the American Psychological Association (1993; 2002) states in its guidelines for providers of psychological services to diverse populations, psychological service providers need a sociocultural framework to consider the diversity of values, interactional styles, and cultural expectations. Sue (1998) has argued that one of the most important ingredients in the provision of culturally competent psychological treatment is scientific-mindedness. A scientifically minded therapist is one who forms hypotheses rather than making premature conclusions about the status of culturally different clients, who develops creative ways to test these hypotheses and who acts on the basis of collected data. In other words, mental health service providers need to ask children and their families specific questions about the values and characteristics of the contexts in which they live, and should tailor interventions accordingly.

Concluding Comments

A final goal of this study was to improve upon previous investigations with the use of a broad range of social variables in combination with an innovative multilevel modeling analysis. Using HLM allowed for an examination of the contextual influences of both culture and SES in a complex, hierarchical data set. Questions about individual level-variables differing across naturally formed groupings could not have been addressed with conventional multivariate designs such as linear regression, as the data violated assumptions about independence of observations. Thus, embracing new analytical techniques resulted in the opportunity to explore cross- and within-culture

differences in a developmental phenomenon, which is seldom done. Moreover, an important aspect of the findings is that they point to similarities as well as differences in the factors linked with social competence across different contexts. Of the social skills and behaviors used as predictors of social competence indicators, both leadership and fairness orientation were found to be invariant predictors of social competence indices (i.e. mutual friendship and liking). As individual predictors of social competence indices, leadership and fairness accounted for 33% and 23%, respectively, of the variance in the social competence score. However, the effects of these variables on social competence were fixed, meaning that they did not vary across individuals. Thus, there appear to be some social skills or behaviors that contribute to social competence indices such as friendship and liking in a similar fashion regardless of context. Although one may find cultural differences in these variables by measuring them in ways that diverge from those in our investigation, this finding is a reminder that in many ways cultures may be more alike than they are different from each other.

By examining more than the typical three broad band scores of aggression, withdrawal, and sociability, the project also demonstrates to peer research the importance of taking a broader view of the factors that affect functioning with peers. In this way, the current study informs of us how peer relations should be studied, regardless of the context in which a study is conducted.

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Appendix A

Parent Letter and Permission Slip – Canadian Sample

William M. Bukowski
Professor
514-848-2424 x2184 (Office)
514-848-2815 (FAX)
Bukowsk@vax2.concordia.ca

**Department of Psychology
and
Centre for Research in
Human Development**

Spring, 2003.

Dear Parents,

I am a professor at Concordia University, where I teach courses and do research on children and adolescents. One of the topics I study is the skills and behaviors that contribute to children having better friendships and social relationships. I am writing to tell you about a study my students and I are conducting with fourth-, fifth-, and sixth-graders at your child's school. This study will help us learn more about children and their development.

As part of the study I am conducting, I will meet with the participating children in their school, and ask them to complete a set of questionnaires about themselves and their friends. In these questions, the children will be asked to tell us (a) who they typically associate with in school, (b) whether or not the other participating children in the class have particular characteristics, (c) how much they engage in behaviors like helping or leading a group, and (d) how they feel about themselves. All the questionnaires will be completed at the child's desk in school and none of the other children will know how any other child has answered the questions. We ask the children to maintain the privacy of their answers and we make certain that their answers are confidential.

We would also like to ask you to complete a questionnaire for us. This questionnaire will ask you some questions about the persons who make up your family and the resources that your family has. It will take you about 15 minutes to complete this questionnaire. All of the information in this questionnaire will be completely confidential. We will send the questionnaire home with your son or daughter and you will return it to us via standard mail in a stamped and addressed envelope that we will provide. *As a token of our appreciation, all families who participate in this part of the project will be given one adult ticket to a movie of your choice at a local theatre.* Although we hope that as many families as possible will participate in this part of the project, children may participate in the classroom

part of the project even if their parents choose not to complete the family questionnaire. A copy of the questionnaire for families can be seen at the school principal's office.

Some parents want to know why we do studies like the one we have planned at your child's school. We do these studies for two reasons. First, parents, teachers, medical doctors, and others want to know how experiences in school affect children's well-being and success. Our study will give answers to these questions. Second, many people are interested in knowing how growing up in Canada differs from growing up in other places. A part of our study is to compare the observations we make with children in Canada to the observations we make with a group of children we are studying in Colombia, South America.

People who do research with children or adults are required to describe the risks and benefits related to participating in their studies. This study poses no risks, other than the risks that are part of children's normal daily lives. It is not a treatment study and it is not intended to provide direct benefits to the students who participate. Most children enjoy participating in studies like this one. The information collected in this study will be completely confidential, and participation is entirely voluntary. Your child is not required to take part; even if you give your permission for him/her to participate, you may change your mind at any time. If your child decides that he/she does not wish to participate, he or she does not have to. This study has been approved by both the English Montreal School Board and the Concordia University Human Research Ethics Committee. If at any time you have questions or concerns regarding your rights or your child's rights as research participants, please feel free to contact Andrea Rodney, Office of Research (Secretary to the Concordia University Human Research Ethics Committee) at (514) 848-4887.

If you have any other questions about the study, please call me at 848-2424 x 2184 or send a letter to me at: Department of Psychology, Concordia University, 7141 Sherbrooke Ouest, Montreal QC H4B 1R6. You can also email me at bukowsk@vax2.concordia.ca.

Please fill out the attached form and have your child return it to his/her teacher tomorrow.

As an incentive for the children to return the permission slip, any child who returns a slip, regardless of whether his/her parent has given permission for participation, will receive one child ticket to a movie of his/her choice at a local theatre.

Thank you for your help. We very much appreciate it.

Sincerely,

William M. Bukowski
Professor

Concordia Friends and Family Study
(Grades 4, 5 & 6)
Spring 2003

PERMISSION SLIP

Please read and sign the following:

I understand that I am being asked if my daughter/son can take part in a research study conducted by Dr. W. M. Bukowski and Ms. S. Mayman. I know that the purpose of the study is to examine what skills and behaviors contribute to children having positive social relationships. I know that if my daughter/son participates she/he will be asked to answer some questionnaires at his/her desk in the classroom. I have been told that questionnaires are about the social relations of young people and how they think and feel about themselves and their friends. I know that my daughter/son does not have to participate in the study, and that even if she/he starts to take part in it, she/he can quit at any time. I also know that all answers will remain confidential and will NOT be shown to anyone. Only Dr. Bukowski and his assistants will know what is in the questionnaires.

Please check one of the following and ask your daughter/son to bring this permission slip into the homeroom teacher tomorrow.

_____ My daughter/son has permission to take part in Dr. Bukowski's study.

_____ My daughter/son **does not** have my permission to take part in Dr. Bukowski's study.

(SIGN) _____

DATE: _____

Child's Name _____

Appendix B
Child Consent Form

**Concordia/Baranquilla Study
2003**

Name _____

Male _____ Female _____ Age _____ Grade _____

Please read and sign the following if you wish to participate in the study:

"I understand that I have been asked to be in a research study that Dr. W. M. Bukowski and Ms. Shari Mayman are doing about how young people feel about themselves and how they get along with others.

I know that if I will be asked to answer some questionnaires in class. I know that I do not have to participate in the study, and that even if I start to take part in it, I can quit at any time. I also know that all answers will be kept confidential and will NOT be shown to anyone. Only Dr. Bukowski and Ms. Mayman and their assistants will know my answers."

(SIGN) _____ DATE: _____

Appendix C

Liking Ratings – English Version

NOW WE WOULD LIKE TO KNOW HOW MUCH YOU LIKE THE OTHER PEOPLE IN YOUR CLASS AT SCHOOL.

BESIDE EACH PERSON'S NAME YOU WILL SEE A SCALE THAT GOES FROM 1 TO 5.

CIRCLE THE NUMBER THAT BEST REPRESENTS HOW MUCH YOU LIKE EACH PERSON. ON THIS SCALE:

"1" MEANS YOU DO NOT LIKE THE PERSON

"2" MEANS YOU USUALLY DO NOT LIKE THE PERSON

"3" MEANS YOU SORT OF LIKE THIS PERSON

"4" MEANS YOU USUALLY LIKE THIS PERSON

"5" MEANS YOU LIKE THE PERSON VERY MUCH

Child 1	1-----2-----3-----4-----5
Child 2	1-----2-----3-----4-----5
Child 3	1-----2-----3-----4-----5
Child 4	1-----2-----3-----4-----5
Child 5	1-----2-----3-----4-----5
Child 6	1-----2-----3-----4-----5
Child 7	1-----2-----3-----4-----5
Child 8	1-----2-----3-----4-----5
Child 9	1-----2-----3-----4-----5
Child 10	1-----2-----3-----4-----5
Child 11	1-----2-----3-----4-----5
Child 12	1-----2-----3-----4-----5
Child 13	1-----2-----3-----4-----5
Child 14	1-----2-----3-----4-----5
Child 15	1-----2-----3-----4-----5

Appendix D

Friendship Nominations – English Version

WHO ARE YOUR FRIENDS?

FIRST WE WOULD LIKE TO KNOW WHO YOU ARE FRIENDS WITH AND WHO YOU LIKE TO SPEND TIME WITH.

Pick the names of the students in your grade who are your best friends from the list below.

Write their names on the lines below putting your best friend on the first line, second best friend on the second line and so on.

You can list as many or as few students as you like, but the names you choose must be from the list below.

Put the names of the boys who are your friends in one list and the names of the girls who are your friend in the other list.

BE SURE TO WRITE THE FIRST AND LAST NAMES:

BOYS

1st friend: _____

2nd friend: _____

GIRLS

1st friend: _____

2nd friend: _____

CHOOSE FROM THIS LIST:

Child 1

Child 2

Child 3

Child 4

Child 5

Child 6

Child 7

Child 8

Child 9

Child 10

Child 11

Child 12

Child 13

Child 14

Child 15

Child 16

Appendix E
Peer Assessment – English Version

WHAT ARE THEY LIKE?

Instructions: Below you will see several different characteristics. After each one there are some blank lines. In the blank lines, put the names of the boys and girls WHO BEST FIT THESE CHARACTERISTICS. Only use the names that are on the list we've given you.

1. Is smart and does well in school.

BOYS

GIRLS

2. Has good ideas for things to do.

BOYS

GIRLS

3. Is shy.

BOYS

GIRLS

4. Thinks they're better than they really are.

BOYS

GIRLS

5. Is a good athlete.

BOYS

GIRLS

6. Is often left out.

BOYS

GIRLS

7. Thinks too much of themselves.

BOYS

GIRLS

8. Is mean to others.

BOYS

GIRLS

9. Is liked by lots of people.

BOYS

GIRLS

10. Is sad.

BOYS

GIRLS

11. Plays fairly.

BOYS

GIRLS

12. Has trouble making friends

BOYS

GIRLS

13. Is a good leader.

BOYS

GIRLS

14. Others do mean things to them.

BOYS

GIRLS

15. Is popular.

BOYS

GIRLS

16. Hurts other people.

BOYS

GIRLS

17. Cares about others.

BOYS

GIRLS

18. Is stuck up and thinks they are better than others.

BOYS

GIRLS

19. Does well in sports.

BOYS

GIRLS

20. Can't get others to listen.

BOYS

GIRLS

21. Makes sure that everyone is treated equally.

BOYS

GIRLS

22. Rarely feels happy.

BOYS

GIRLS

23. Helps others when they need it.

BOYS

GIRLS

24. Would rather play alone than with others.

BOYS

GIRLS

25. Always knows the right answer.

BOYS

GIRLS

26. Others call them names.

BOYS

GIRLS

27. Are by themselves because they prefer to be.

BOYS

GIRLS

28. Others try to hurt them.

BOYS

GIRLS

29. Is a good dancer.

BOYS

GIRLS

30. Causes other people trouble.

BOYS

GIRLS

31. Makes people laugh.

BOYS

GIRLS

32. Is lonely.

BOYS

GIRLS

33. Complain about their problems.

BOYS

GIRLS

Appendix F

Parent SES Measure – Canadian Sample

Concordia Friends and Family Study

The following is a short questionnaire about your family. This information will help us learn more about the children participating in our research project. Like all of the information in our study, the information on this questionnaire will be kept **strictly confidential**.

1. Child's Name: _____
2. Child's School: _____
3. Child's Age: _____
4. Child's Grade: _____
5. Your postal code: _____
6. Language(s) spoken at home: _____
7. Parents' country of origin: _____
8. If country of origin is not Canada, number of years in Canada: _____
9. Person filling out this questionnaire: _____
10. Please list all of the members of your household, their ages, and their relationship to your child:
(e.g. Jane Smith, age 8, child's sister)

_____	_____
_____	_____
_____	_____
_____	_____

The next four pages contain questions about the adults living in your household. Each page is for 1 adult member of your household. Please fill out one page for EACH adult living in your household. You may only need one page, or you may need all four. At the top of each page, be sure to indicate which adult you are referring to and their relation to your child (e.g., Deborah Smith, child's mother).

The following information is about: _____

1. Circle the *highest* educational degree attained by the person named above:

none (go to question 2)	vocational degree	Ph.D., M.D., etc.
high school diploma	bachelor's degree	
associate degree	master's degree	

2. What is the highest grade in school completed by the person listed above? _____

3. Is this person currently working at a paid job?

Yes (**go to question 7**) _____ No _____

4. Does this person do any paid work at all, even if it's part time?

Yes (**go to question 7**) _____ No _____

5. If this person is not working, which of the following are true (circle one):

looking for work	keeping house/stay-at-home parent
unable to work	other

(specify): _____

6. Has this person ever worked for 6 months or more?

Yes _____ No _____

7. What is this person's usual

job? _____

8. What are the main activities of this job?

9. What industry is this job

in? _____

10. Which category (A, B, C, etc.) is closest to this person's income last year?

- | | |
|--------------------------------|--------------------------------|
| A. \$15, 000 or below | F. over \$55, 000 to \$65, 000 |
| B. over \$15, 000 to \$25, 000 | G. over \$65, 000 to \$75, 000 |
| C. over \$25, 000 to \$35, 000 | H. over \$75, 000 to \$85, 000 |
| D. over \$35, 000 to \$45, 000 | I. over \$85, 000 to \$95,000 |
| E. over \$45, 000 to \$55, 000 | J. over \$95, 000 |

Appendix G
Individualism/Collectivism Rating Scale

The Things That I Like

Circle the number that best describes how you feel. On this scale, 1 means that this is really not true for you, and 5 means that this is really true for you.

Really Not True	Really True
1-----2-----3-----4-----5	

1. I don't talk to my friends about my problems. I solve them myself.

1-----2-----3-----4-----5

2. I would lend money to someone in my family if he or she needed help.

1-----2-----3-----4-----5

3. I like spending time with other kids in my neighbourhood or apartment building.

1-----2-----3-----4-----5

4. When I have a big decision to make, I don't listen to my relatives' advice.

1-----2-----3-----4-----5

5. I don't pay attention to my friends' advice when I have to make an important decision.

1-----2-----3-----4-----5

6. The help of classmates is really important for getting good grades.

1-----2-----3-----4-----5

7. If I have a problem, I know my parents will help me.

1-----2-----3-----4-----5

8. I like meeting and talking to my neighbours or people in my building.

1-----2-----3-----4-----5

9. It's less fun to take trips with friends, because you can't always do what you'd like.

1-----2-----3-----4-----5

10. Students should be able to count on their classmates for help with their schoolwork.

1-----2-----3-----4-----5

11. Kids should listen to their parents' advice when deciding what to do when they grow up.

1-----2-----3-----4-----5

12. It wouldn't help to tell my relatives about my problems.

1-----2-----3-----4-----5

13. My neighbours have never borrowed anything from me or my family.

1-----2-----3-----4-----5

14. When I'm making a decision, I don't think about how it affects my parents.

1-----2-----3-----4-----5

15. I wouldn't let my cousin use my bicycle.

1-----2-----3-----4-----5

16. We should always help our friends, no matter what.

1-----2-----3-----4-----5

17. It is always good for classmates to study in groups.

1-----2-----3-----4-----5

18. My success and my grades at school depend on the love my parents give me.

1-----2-----3-----4-----5

19. I would lend money to a classmate who needed to buy lunch.

1-----2-----3-----4-----5

20. It's not good to talk too much to your neighbours or people in your apartment building.

1-----2-----3-----4-----5

21. My grades at school shouldn't matter to my parents.

1-----2-----3-----4-----5

Appendix H

Explanation of Mean Differences on Individualism/Collectivism Rating Scale

As part of a larger project on culture and social behavior, an adapted version of the INDCOL scale (Hui, 1988) was administered to participants (Appendix G). The original adult scale consisted of 63 items that comprise six subscales pertaining to individualistic-collectivistic orientation toward spouse, parents, kin, neighbors, friends, and co-workers/classmates. Dayan, Doyle, and Markiewicz (2001) revised the scale to make it more appropriate for children. As such, the spouse and co-worker subscales were dropped, and language on many items was simplified to facilitate young children's understanding. The revised version used in the current project was further shortened in order to respect time constraints within the participating schools. This version of the INDCOL scale consisted of 21 items.

For the purposes of this analysis, combinations of items were used to create the following subscales : (1) peer individualism ("I don't talk to my friends about my problems – I solve them myself", "I don't pay attention to my friends' advice when I have to make an important decision", and "it's less fun to take trips with friends, because you can't always do what you'd like") (2) family individualism ("it wouldn't help to tell my relatives about my problems", "when I'm making a decision I don't think about how it affects my parents", "I wouldn't let my cousin use my bicycle", and "my grades at school shouldn't matter to my parents"), (3) peer collectivism ("the help of my classmates is really important for getting good grades", "students should be able to count on their classmates for help with their schoolwork", "we should always help our friends, no matter what", "it is always good for classmates to study in groups", and "I would lend money to a classmate who needed to buy lunch"), and (4) family collectivism ("if I have

a problem, I know my parents will help me”, “kids should listen to their parents’ advice when deciding what to do when they grow up”, “it wouldn’t help to tell my relatives about my problems”, and “my success and my grades depend on the love my parents give me”. The correlation between the peer individualism and family individualism scales was .45, and the correlation between the peer and family collectivism scales was .40. Thus, to create a composite Individualism score, the average peer individualism and family individualism scores were combined into an Individualism scale ($\alpha = .71$). Similarly, the average peer and family collectivism scores were combined into a Collectivism scale ($\alpha = .64$).

A univariate analysis of variance was conducted to determine whether individualism and collectivism varied as a function of culture, SES, and sex. For individualism, a significant main effect was found for sex ($F = 28.57; p < .001; \eta^2 = .03$). Follow-up analyses indicated that individualism was higher in boys ($M = 2.57$) than in girls ($M = 2.32$). In addition, significant main effects were found for culture ($F = 7.52, p < .001; \eta^2 = .01$) and SES ($F = 141.74, p < .001; \eta^2 = .12$), but these were superseded by the interaction between culture and SES ($F = 7.52; p < .001; \eta^2 = .01$). Overall, individuals in Colombia were higher on individualism than their Canadian counterparts, and individualism was higher among low-SES individuals than among high-SES individuals. Subsequent analysis indicated that the effect of SES on individualism was bigger in Colombia than Canada (see Figure 6). Low SES individuals in Colombia ($M = 2.97$) had higher individualism scores than low-SES individuals in Canada ($M = 2.43$), and high-SES individuals in Colombia ($M = 1.89$) had lower scores than high-SES individuals in Canada ($M = 2.16$).

For collectivism, a significant main effect was found for culture ($F = 61.57, p < .001$; $\eta^2 = .06$). Subsequent analyses demonstrated that individuals in Colombia had higher collectivism scores ($M = 4.24$) than individuals in Canada ($M = 3.89$). In addition, there was a significant effect of the interaction between sex and SES ($F = 7.281; p < .001$; $\eta^2 = .007$). Post-hoc analyses indicated that there were differences in collectivism scores among low-SES girls and boys ($M_s = 4.19$ and 3.97 respectively) but not among high-SES girls and boys (see Figure 7).

In summary, there were clear effects of culture on the collectivism scores, such that collectivism was higher among individuals from Barranquilla than among those from Montreal. This supports Hofstede's (1980) findings of higher collectivism among South Americans than among North Americans. With regards to individualism, our results provide partial support for Oyserman's et al's (2002) recent finding that North Americans are not only less collectivistic than their South American counterparts, but also less individualistic. However, these findings are mitigated by the effects of SES, which were not explored in the meta-analysis conducted by Oyserman and colleagues. In addition, it should be noted that the reliability of the individualism and collectivism ratings were relatively low (.71 and .64 respectively), which may call our findings into question. Overall, the ratings on the individualism/collectivism scale utilized in this project may stand alone as interesting and relevant results, but could not be included in the analyses examining the predictors and consequences of social competence due to their correlations with the level 2 variables used in the multilevel modeling analysis as well as their low reliability scores.

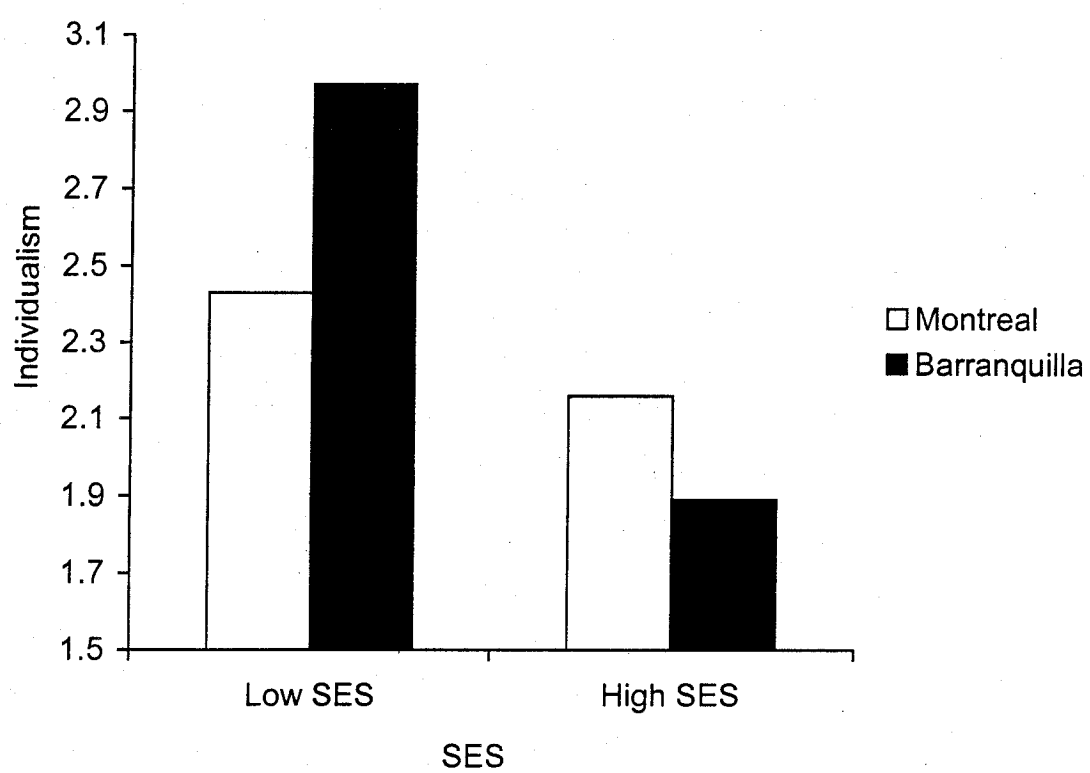


Figure 7: Individualism by culture and SES

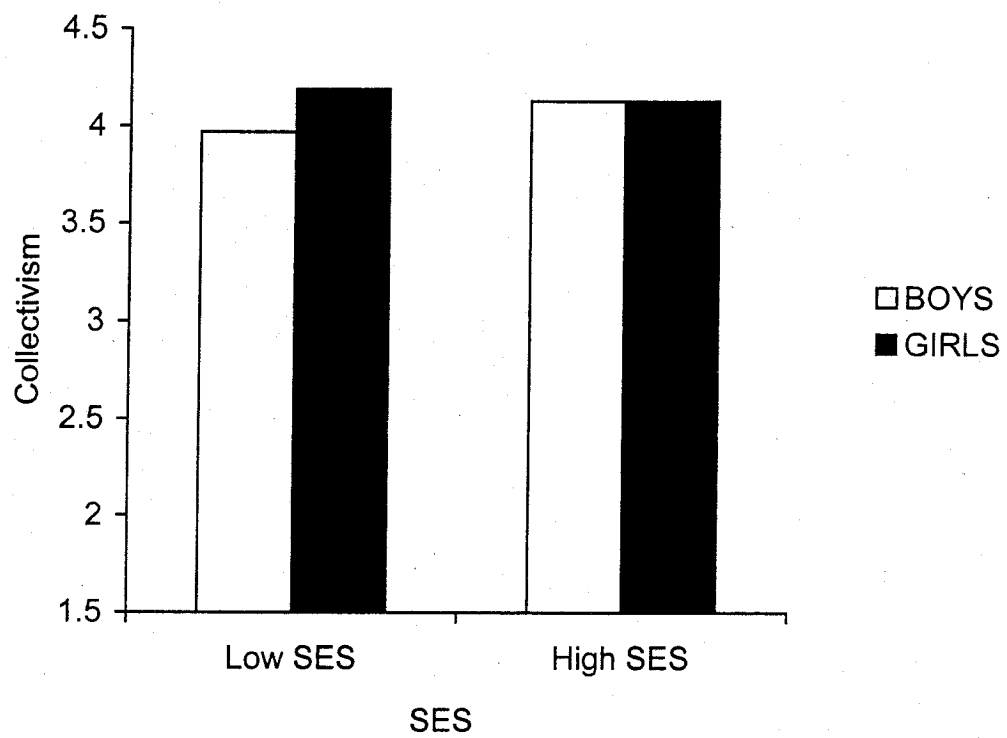


Figure 8: Collectivism by sex and SES