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Running Head: U.S. AND INDONESIAN CHILDREN'S DESCRIPTIONS

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## Abstract

Previous studies of aggression in childhood have found that boys, as a group, are more aggressive than girls. The majority of these studies, however, focus only on physical aggression. Recently several studies have been conducted that differentiate relational aggression from physical aggression. Relational aggression involves harming others through the purposeful damage to their peer relationships (i.e., spreading rumors or ostracizing a peer from a group activity). Several studies have found sex differences in relational aggression, as well as physical aggression. The present study explores gender, developmental, and cultural differences and similarities in relational, physical, and verbal aggression in US and Indonesian children and adolescents' free descriptions of disliked peers. As hypothesized, the results of logistic regressions indicated that males were more likely than females to describe physical aggressive behavior, while females were more likely than males to describe relationally aggressive behavior. These results were found across cultures and age groups. This study extends the research on relational aggression by utilizing a new methodology for cross-cultural research on relational aggression.

# Descriptions of Peers' Relational Aggression in U.S. and Indonesian Children and Adolescents: Gender, Developmental and Cultural Comparisons

A popular children's nursery rhyme by Mother Goose goes, "What are little girls made of? Sugar and spice, and everything nice. That's what little girls are made of." This poem suggests that females may be less aggressive than males, but is that true in the playgrounds and backyards of America and abroad? One needs to look no further than the realm of Mother Goose nursery rhymes to find a contrasting viewpoint. "There was a little girl who had a little curl that hung in the middle of her forehead; when she was good she was very very good, but when she was bad she was horrid." This poem suggests that girls, too, can be bad, but how are little girls bad? Are they bad in the same way as little boys? The current study is designed to assess gender differences in aggression. In addition, we will expand this to look at the extent to which gender differences in indirect aggression are seen in different cultures and in children and adolescents. Prior to outlining the study, relevant issues in the literature will be explained. After reviewing basic definitions and typologies of aggression, the concept of relational aggression will then be explored as this is the major focus of the proposed study. Next, gender, developmental, and cultural differences in the aggression literature will be reviewed and methodological issues will be discussed. Finally, the proposed study that will focus on gender, developmental, and cultural effects on relational aggression among U.S. and Indonesian children and adolescents, will be described.

## Definitions of Aggression

Although aggression has been the topic of much research in both social and developmental psychology, there is controversy about the definition of aggression. Aggression has been defined variously as a natural instinct, a behavior that harms another person, and a social label that we apply to different behaviors depending on our judgments about the meaning of those acts (Shaffer, 1994).

The lack of consensus about the definition of aggression is due in part to the question of whether or not intention to do harm constitutes an essential feature of aggression. Some have argued that because it is difficult to accurately judge others' intentions, aggression should be defined solely on the basis of

the results of the action and references to intended motives should be avoided (Schaffer, 1996). For example, Arnold Buss (1961) defined aggression as "a response that delivers noxious stimuli to another organism" (p. 3). More recently, Leonard Eron defined aggression similarly as "an act that injures or irritates another person" (Brannon, 1996, p. 209). Both of these definitions focus on the behavior or consequences of aggression and not intentionality.

Other researchers have argued that aggression based solely on the consequences of the actions is ambiguous because it prohibits distinguishing between aggression and accidental or non-malevolent administration of noxious stimuli. Based on Buss's or Eron's definitions of aggression, both a dentist's filling a cavity and a person accidentally tripping another person would be considered aggressive acts. In response to these concerns, other researchers have defined aggression as "any form of behavior designed to harm or injure another living being" (Shaffer, 1994, p. 327). Note, however, that even including intentionality does not completely resolve the ambiguities of the aggression concept. Brannon (1996) noticed that even among researchers who include intentionality in their definitions of aggression, there is no consensus about which behaviors should be included as aggressive. Therefore, the literature on aggression has been complicated by inconsistencies in definition.

There have been two major approaches to studying aggression. Some researchers have focused on theory generation and testing, e.g., ethology, psychoanalytic theory, and social learning theory. An alternative approach has been to develop typologies of aggressive behavior. In the next section, various typological approaches to aggression will be briefly outlined due to the relevance of the typological approach to the proposed study.

## Typological Approach to the Study of Aggression

Largely atheoretical, typological analysis refers to the process of developing classification schemes that attempt to subdivide types of behavior. Over the years, a number of such typologies have been proposed for aggression.

One typology of aggression focused on differentiating hostile (reactive) and instrumental (proactive) aggression. Feshbach (1964), was one of the first to distinguish between these two types of aggression. According to Feshbach, hostile aggression is aggression that originates from anger, whereas instrumental aggression is initiated to accomplish a specific goal. Hartup (1974) continued the work on this typology.

According to Hartup (1974), hostile aggression is defined as acts for which the major goal is to inflict harm on another person (e.g., tripping someone so that they will fall down and get hurt). In contrast, instrumental aggression refers to those actions that although aggressive in form and potentially harmful to another person, are motivated by goal-directed intentions (e.g., pushing another child in an attempt to get a toy the child was playing with). This classificatory system is based specifically on a distinction of intentionality of the behaviors. In one of his studies using this typology, Hartup (1974) found a decrease in the frequency of instrumental aggression during the four to seven year-old period, whereas no developmental effects for hostile aggression were found.

Other typologies of aggression have avoided the concept of intentionality. Ethologist W. McGrew, for example, described agonistic behaviors (which included both aggressive behaviors and other types of oppositional behaviors) by categorizing the behaviors themselves and not the motivations behind them. Some behavior patterns that McGrew coded in agonistic situations includes the following: beat ("overarm blow with palm side of the lightly clenched fist"), object beat ("beat with object held in hand"), pinch ("thumb and forefinger forcibly opposed with object or part of body in between"), punch ("arm is moved rapidly from horizontal position at side, forward 180 degrees in sidearm motion"), open punch ("punch with hand open, slap"), push ("arms extended forward with wrists flexed, force applied"), and kick ("leg is flexed then rapidly extended at knee and hip, usually oriented toward person or object") (McGrew, 1972, p. 70).

One of the most frequently used typologies in the study of aggression differentiates between verbal and physical aggression. Most classification systems used to study childhood aggression have distinguished between verbal and physical aggression (see Maccoby & Jacklin, 1974, for a review). For

example, ethologists Archer and Westeman (1981), used the categories of verbal and physical aggression to study gender differences in the aggressive behavior of British schoolchildren.

Another frequently used typology differentiates between direct and indirect aggression. Although used by many researchers over the years, indirect and direct aggression have been defined in a number of ways. Buss (1961) was one of the first researchers to make this distinction. According to Buss (1961), direct aggression involves direct confrontation between aggressor and target, while indirect aggression involves harming other people without confronting them directly, thus, avoiding counterattack. Indirect aggression could be verbal (i.e. spreading malicious rumors) or physical (stealing someone's notebook). The indirect aggression subscale on the Buss-Durkee Hostility Inventory published in 1957, included such behaviors as spreading gossip, banging on the table, pouting, and playing practical jokes (Richardson & Green, 1997). Some researchers have suggested that Buss's definition of indirect aggression was too broad and included behaviors that were not necessarily aggressive.

Feshbach (1969), one of the first researchers to conduct observational studies of children's aggressive behavior, defined indirect aggression somewhat differently than Buss. According to Feshbach (1969) indirect aggression is "a response which results in pain to a stimulus person through rejecting and excluding him" (p. 250). Indicators of indirect aggression included the following behaviors: ignoring (paying no attention to an approach), avoiding (moving away), refusals (denying requests for help or play), and exclusion (actively rejecting). In contrast to Buss's definition, which included behaviors such as pounding on the table, Feshbach only included behaviors that have a social target.

Recently, more than fifteen years after the work by Buss and Feshbach, there has been renewed interest in typological analysis of children's aggression. This has been stimulated by with Crick and her colleagues' (Crick & Grotpeter, 1995; Crick , Bigbee, & Howes, 1996) modification of the concept of indirect aggression that has been described and researched by a group of Finnish researchers (Lagerspetz, Bjorkqvist, & Peltonen, 1988; Bjorkqvist, Lagerspetz, & Kaukiainen, 1992). This led to the subsequent development of the category of relational aggression (Crick & Grotpeter, 1995). Crick and

colleagues divided aggression into two categories. The first category, relational aggression, focuses on harming others by purposely damaging their peer relationships and includes behaviors such as spreading malicious rumors, excluding friends from a play group, and trying to get other children not to play with a certain peer. All other aggressive behaviors, which do not fall under relational aggression, constitute the second category of aggression. One reason why this work has received so much attention is because of the gender differences in aggression that have emerged when distinctions between relational and non-relational aggression are established. Because of the importance of this work for the present study, the next section will outline Crick's model in detail.

Relational Aggression

Crick and Grotpeter (1995), defined relational aggression as "harming others through purposeful manipulation and damage of their peer relationships" (p. 711). Crick and her colleagues redefine the typology of direct and indirect aggression as relational and overt aggression. According to Crick and Bigbee (1998), "relational aggression harms others through hurtful manipulation of their peer relationships or friendships, whereas overt aggression harms others through physical damage or the threat of such damage" (p. 337). Items on Crick and colleagues' peer nomination inventory assessing relational aggression include the following: "Tells friends they will stop liking them unless friends do what they say"; "When mad at a person, ignores them or stops talking to them"; and "Tries to keep certain people from being in their group during an activity or play time" (p. 713).

Like Feshbach's concept of indirect aggression (i.e., "rejecting and excluding") and unlike Buss's definition of indirect aggression (i.e., "avoiding counterattack"), Crick and Grotpeter's concept of relational aggression includes some behaviors that directly confront the target and others that avoid confrontation. Recently, Crick and colleagues have stopped using the term overt aggression (Crick et al., 1999). This change in terminology helps to clarify the issue that relational aggression itself can be either covert (spreading malicious rumors) or overt (purposeful exclusion of someone from a social group). Instead of the overt versus relational dichotomy, Crick and her colleagues (1999) have contrasted relational aggression with physical aggression which they define as harming "through damage or threat

of damage to another's physical well-being" and verbal aggression which they describe as threats to another's physical well being or personal insults (Crick et al., 1999, p. 77). The key distinction between relational aggression and both verbal and physical aggression is that relational aggression is the only one that specifically focuses on damage to relationships. Table 1 provides examples of the terminological distinctions made by Crick and her colleagues.

No one has clearly defined or labeled the category of aggressive behavior that can be differentiated from relational aggression. For lack of a better term, I will use the term non-relational aggression to refer to physical aggression and verbal aggression that is not focused on harming relationships. In an attempt to be consistent with the terminology used by Crick and her colleagues (1999) in their recent chapter on relational aggression, in the present study I will use the term verbal aggression to refer to non-relational verbally aggressive behavior (i.e., direct verbal insults and verbal threats of physical harm). Relationally aggressive behaviors which are verbal in form (i.e., gossiping) will be excluded from the category of verbal aggression. It is important to note, however, that much of the previous research on verbal aggression did not make a distinction between relational and non-relational forms of verbal aggression. As described by Crick et al, (1999), however, relational aggression has consistently emerged as a factor separate from non-relationally aggressive behaviors (both verbal and non-verbal) during factor analyses of aggression questionnaire items (Crick, Casas, & Mosher, 1997).

Similar Typological Systems of Aggression

Several researchers have proposed typological systems very similar to those of Crick and her colleagues. Many of these earlier typological systems influenced the development of Crick and her colleagues' category of relational aggression. In the late 1980's, a group of Finnish researchers including Lagerspetz, Bjorkqvist, and Peltonen (1988), defined indirect aggression as behaviors that "exploit social relations among peers in order to harm the person at whom the anger is directed" (Lagerspetz, Bjorkqvist, Peltonen, 1988 p. 409). In 1992, Bjorkqvist, Lagerspetz, and Osterman developed a questionnaire to assess indirect aggression called The Direct & Indirect Aggression Scales (DIAS) (Bjorkqvist, 1994). Included in this measure were questions regarding behaviors such as arguing,

telling lies behind someone's back, sulking, and being someone else's friend in revenge. Note that this definition of indirect aggression is similar to that of Buss's definition, which emphasized counterattack, and it includes many behaviors that may not necessarily be aggressive (e.g., sulking).

Cairns and his colleagues (1989) distinguished between two types of aggression—physical aggression and social ostracism. These researchers also used the term social aggression when describing the behaviors they labeled social ostracism. In their six-year longitudinal study of schoolchildren, Cairns et al. conducted social cognition interviews that included asking students about their recent conflicts. In analyzing the interview data, there was a special focus on the presence of physical aggression that included hitting, shoving, and striking and social ostracism that included "active rejection of persons from a clique, slander and defamation of reputation by gossip, and alienation of affection" (Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989, p. 321). Although Cairns and his colleagues did not present their categories of aggression as a specific typological system, their differentiation between physical and social ostracism influenced the development of other typological systems of aggression including that of Galen and Underwood (1997) and Crick and her colleagues (Crick & Grotpeter, 1995).

In the 1990's researchers Galen and Underwood conducted a study of social aggression. They defined social aggression as behavior that is "directed toward damaging another's self-esteem, social status, or both, and may take direct forms such as verbal rejection, negative facial expressions, or body movements, or more indirect forms such as slanderous rumors or social exclusion" (Galen & Underwood, 1997, p. 589). Galen and Underwood, therefore, used the term social aggression as a broad category that subsumes what Crick and her colleagues termed relational aggression and also includes the additional elements of body language, such as negative facial expressions and gestures, as well as what I have labeled as non-relational verbal aggression (see Table 1).

Most recently, Hart and his colleagues (1999) have reconceptualized some of the prior concepts of aggression and have suggested differentiating between relational and social aggression. Hart et al. (1999) conceptualize relational aggression as "hostile acts where relationships are used as the vehicle of harm, be it verbal or non-verbal, direct or indirect, overt or covert in nature" (p. 3). In addition, these

researchers use the term social aggression to refer to a narrower range of behaviors than do Galen and Underwood by excluding relational aggression and other forms of indirect aggression. According to Hart et al. (1999) social aggression refers to direct verbal aggression and negative facial expressions, body movements and gestures.

## Gender, Developmental and Cultural Differences in Aggression

Because of the heterogeneity of definitions and terminology employed by researchers studying relational aggression and similar behaviors, for the purpose of this literature review the term indirect aggression will be used loosely to refer to all these definitions. This usage of the term indirect aggression subsumes the different conceptualizations of Crick and her colleagues' relational aggression, Lagerspetz and colleagues' indirect aggression, Cairns and his colleagues' social ostracism, Galen and Underwood's social aggression, and Hart and colleagues' reconceptualization of social and relational aggression under one broad category. That is, I will use the term indirect aggression to refer to any behavior that has been labeled in previous research as aggression that indirectly harms another person. This category includes such behaviors as the following: displaying negative facial expressions or gestures, excluding kids from an activity, spreading malicious rumors, denying requests for help, moving away when approached, and harming others' property. Although this is not completely satisfactory, I will use the term indirect aggression broadly during the following literature review in an attempt to include the multiple approaches used to investigate this topic. When referring to specific research studies the researchers' specific terminology will be used. To avoid confusion, the term relational aggression will be used only to refer to studies that have specifically used the concept of relational aggression as defined by Crick and colleagues. As Crick et al. (1999) discussed in their recent review of childhood aggression, the different conceptualizations of indirect aggression are relatively distinct. Therefore, the results of studies using one conceptualization may not fully generalize to other conceptualizations of indirect aggression.

Gender Differences in Direct and Indirect Aggression

The aggressive behavior displayed by females has only recently become the topic of extensive study (Bjorkqvist & Niemela, 1992). In 1977, a review of studies of aggression found that 54% of the experimental studies of human aggression studied only males while 8% reported studying females only (Bjorkqvist, 1994). One reason for the limited attention to aggression in girls has been the focus on physical aggression (Bjorkqvist & Niemela, 1992). Olweus (1978), for example, studied bullying in adolescents and concluded that this behavior rarely occurs among female adolescents. On the basis of this conclusion, which was derived from measurements of physical aggression, Olweus stopped including females in his research on bullying for almost a decade (Olweus, 1978).

Most of the early reviews of gender differences in aggression found that males were more aggressive than females, and it has been claimed that males are the more aggressive gender (Block, 1983). Triandis (1994) extrapolated this idea cross-culturally by stating "one human universal is that males commit more acts of aggression than females" (p. 215). These conclusions were based on relatively few studies that almost exclusively operationalized aggression as physically aggressive acts. For example, Maccoby & Jacklin's well-known review published in 1974, concluded that males were more aggressive than females. They reviewed studies that predominantly defined aggression as physical, including several observational studies of aggressive behavior on school playgrounds, and were conducted with North American children. The review of gender and aggressive behavior conducted by Eagly & Steffen (1986) is consistent with Maccoby & Jacklin's findings.

Researchers have suggested that drawing the conclusion that males are more aggressive than females is problematic because of the possibility that females are more likely than males to exhibit indirect aggression (Bjorkqvist & Niemela, 1992). In Table 2, the existing studies that have explored gender differences in children's aggression are presented. There are considerable differences between studies in definition of aggression, measurement procedures, and age groups studied. Despite these differences, there are several trends apparent across the studies of indirect aggression in children.

In 15 out of 18 studies in Table 2, the researchers found that for at least one age group, girls reported or were reported by others as displaying more indirect aggression than boys. It should be noted, however, that some researchers did not find girls to be more indirectly aggressive than boys (Osterman et al., 1994; Green, Richardson, & Lago, 1996; & Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998). Some studies utilizing participants from multiple age groups did not find gender differences for at least one age group (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992, for eight year olds; Owens & MacMullin, 1995, for second through sixth grade; Galen & Underwood, 1997, for tenth grade). In only one study (Lindeman, Harakka, & Keltikangas-Jarvinen, 1997) were males found to be more aggressive than females for physical and indirect aggression. One possible explanation for these patterns is that different age groups were studied. Perhaps a gender by developmental interaction exists, such that gender differences are seen only during particular developmental periods. This hypothesis will be addressed in the next section in which developmental effects will be reviewed.

The studies listed in Table 2 also report contrasting results about gender differences in physical aggression. When gender differences in direct aggression emerged, typically it was boys who were more physically aggressive than girls. There were, however, a few exceptions to that general trend. In two studies, no gender differences in physical aggression were reported (Lagerspetz & Bjorkqvist, 1994; & Hart et al., 1998). Lagerspetz & Bjorkqvist (1994) found, for example, that when direct aggression was divided into direct physical and direct verbal aggression, girls reported more direct verbal aggression than boys.

Gender differences in verbal aggressive behavior have been inconsistent. Maccoby and Jacklin (1980) found that males engage in both more physical and more verbal aggression than females in many studies reviewed, but in almost half of the studies their were no sex differences found. Whiting and Edwards (1973), however, found that boys engaged in more verbally aggressive encounters in the six cultures that were studied.

It is not clear in much of the previous research on verbal aggression, whether relationally aggressive verbal behaviors have been distinguished from non-relational verbal aggression. Verbal aggression (i.e., insulting one to their face, teasing them, etc.) has been used by Lagerspetz and colleagues as a different type of aggression than indirect aggression that is verbal in form. Using this distinction, Lagerspetz et al. (1988) found that verbal aggression was displayed equally by both genders. In contrast, Owens and MacMullin (1995), who also distinguished verbal from indirect aggression, found that boys showed more verbal aggression than girls. Lagerspetz and Bjorkqvist (1994) found that among young adults, girls display more direct verbal aggression than boys. Thus, the findings of gender differences in verbal aggression are not consistent.

Overall, the prior work on gender differences in aggression including both indirect and direct aggression suggests that girls are exhibit more indirect aggression than boys, whereas boys display more direct aggression than girls, although this finding is more often based on assessment of physical aggression than verbal aggression. The gender differences in frequency of using these different types of aggression provide further evidence for the utility of distinguishing between indirect and direct forms of aggressive behavior. It is also possible that for aggression, gender may also interact with developmental level.

## Developmental Differences in Direct and Indirect Aggression

There are two types of developmental effects, main effects of age for physical, verbal, and indirect aggression and possible gender by age interaction effects, apparent in the literature. The earliest documented observations of peer-directed physical aggression occurred at the age of one year (Coie & Dodge, 1998). There is a general trend in the literature suggesting that physical forms of aggression decrease and verbal forms of aggression increase between the ages of two and four (see Parke & Salby, 1983; Coie & Dodge, 1998, for a review). During elementary school, physical aggression levels continue to decline (Loeber, 1982). The form of aggression may also change during childhood. For example, Hartup (1974) found that four to six year-olds had higher rates of instrumental aggression, but six to seven year-olds displayed higher rates of hostile aggression. Findings from longitudinal studies of

physical aggression reveal that physical aggression often decreases as children reach adolescence (see Parke and Salby, 1987; Coie & Dodge for a review). Loeber (1982), for example, concluded that fighting and hostile aggression reaches a peak before adolescence and declines afterwards. Cairns et al., (1989) found similar declines in hostile physical aggression from early through mid-adolescence.

The developmental patterns for verbal aggression have not been assessed as often as those of physical aggression. Many previous studies of verbal aggression have not distinguished it from relational aggression (Campbell, Sapochnik, & Muncer, 1997). In one study by Bjorkqvist and colleagues (1992) which distinguished between direct verbal aggression (i.e., insults, calls the other names, and teases) and indirect aggression (i.e., ignores, gossips, shuts out of the group) found a significant developmental difference where 15 year olds used more verbal aggression than 8 year olds. Other studies of verbal aggression, have not found any developmental differences (Schaffer, 1996).

Several researchers have theorized that the development of indirect aggression may occur subsequent to the development of physical aggression. Bjorkqvist, Osterman, & Kaukiainen (1992) suggest that direct physical, direct verbal, and indirect aggression may be seen as developmental stages of aggressive behavior dependent upon cognitive development. These researchers suggest that indirect aggression demands well-developed verbal and social skills, which are typically not present prior to adolescence. There has been some research finds that support this developmental hypothesis. Osterman, Bjorkqvist et al. (1994) found that 8 year-olds reported indirect aggression relatively infrequently as compared to other types of aggression. Bjorkqvist et al., (1992) found that 8 year-olds reported less relational aggression than 15 year-olds. Other researchers have not found a consistent developmental progression in indirect aggression. Owens & MacMullin (1995), for example, found that indirect aggression increased for girls from elementary school through high school, while it decreased for boys during that time period. Therefore, it is unclear whether or not indirect aggression typically increases with age.

To further study the developmental trends in indirect aggression, Bjorkqvist and colleagues hypothesized a possible gender by age interaction effect for indirect aggression. During adolescence,

according to Bjorkqvist et al, (1992) females mature more quickly than males and thus, their better developed verbal and social skills may allow them to make use of more indirect aggression.

There has been some support for Bjorkqvist et al.'s gender and age interaction theory. Bjorkqvist, Lagerspetz and Kaukiainen (1992) found that indirect aggression increases dramatically at about age 11 for girls. Similarly, Galen and Underwood (1997) found that girls in tenth grade were more socially aggressive than girls in fourth through seventh grades. Also, Owens & MacMullin (1995) found that gender differences in indirect aggression were not apparent for second through sixth graders but were apparent in ninth through eleventh grades, with girls reporting more indirect aggression.

In contrast to Bjorkqvist et al's theory of indirect aggression, results from other studies have caused researchers to question the hypothesis that a consistent increase in indirect aggression occurs with age. Galen and Underwood (1997), for example, found that indirect aggression increased with age for girls, while indirect aggression decreased with age for boys. Boys in their study reported less social aggression in tenth grade than in fourth through seventh grade. In their longitudinal study, Cairns et al. (1989) found that while social alienation and social manipulation increased dramatically with age for girls, boys rarely reported social manipulation behaviors at any age. Lindeman, Harakka, & Keltikangas-Jarvinen (1997), for example, found that there was a curvilinear trend in indirect aggression for both girls and boys. They found that 14 year-olds were more indirectly aggressive than 11 year-olds or 17 year-olds. The authors suggest that since cognitive processes do not develop curvilinearly during adolescence, factors other than cognitive process, such as context, may account for the developmental differences in aggression.

Others criticize Bjorkqvist et al.'s theory because researchers have found gender differences in indirect aggression reported much earlier than would be expected according to the theory. Although Bjorkqvist et al. (1992) and Osterman et al., (1994) did not find any gender differences in indirect aggression in eight year-olds, Osterman et al. (1998) found indirect aggression to be more frequent than direct aggression for eight year-old girls. Also, Hart et al. (1999) found that for teacher reports of aggression among a preschool-aged sample, girls used relational aggression more often than boys. It is

possible that the teachers are aware of indirect aggressive strategies, while the preschoolers are not. However, to further complicate the trends in aggression found at the preschool level, Hart et al. (1998) found that teacher reports of preschoolers' indirect aggression indicated no gender differences. Thus, the contrasting results about developmental trends in indirect aggression, make it difficult to determine the developmental course of indirect aggression.

On the basis of this limited evidence, it appears that gender differences in indirect aggression are more pronounced during adolescence. Failure to find gender differences in indirect aggression or contradictory findings about gender differences in indirect aggression appear most often in studies where participants are in preschool, middle childhood, or adulthood, while gender differences are most apparent in studies of early adolescents. The majority of the findings, however, suggest that there may be a gender by age interaction in the use of indirect aggression. It seems possible that gender differences in indirect aggression are most apparent in early adolescence.

## Cultural Differences in Aggression

Cultural differences in aggression have been a topic of interest to many scholars over the years. In anthropological studies, cultures have often been described by contrasting their aggressive behaviors with those typically found by U.S. researchers studying American society. Much cultural variation in aggression has been documented. There are some societies in which aggression is virtually non-existent and other societies in which aggression occurs daily (Goldstein & Segall, 1983). Societies also differ on their attitudes toward aggression—admire it, some condone, and some forbid it (Triandis, 1994). Whitings and Edwards (1988), for example, found that there were many cultural differences in the expression of different forms of aggressive behaviors they labeled as egoistic dominance (i.e., threatening, assaulting, and competing).

In one classic cross-cultural study, the six cultures study, Whiting and Whiting (1975) found that boys scored higher than girls on physically aggressive behavior in five out of the six cultures studied including the U.S., Japan, the Philippines, and India. The researchers concluded that physically aggressive behavior is sex-typed, at least between the ages of three to eleven. The results of this study

suggest that patterns of physical aggression are similar across cultures, but some researchers feel that there has not been enough cross-cultural research on gender differences in aggression to support such a conclusion (Bjorkqvist & Niemela, 1992).

Although many of the previous reviews of research on aggression (i.e. Park and Salby, 1983; Triandis, 1994) emphasize that males are consistently more physically aggressive than females, there are some reported exceptions. In some societies women are as physically aggressive as men (Bjorkqvist & Niemela, 1992). Cook (1992), for example, found that among the inhabitants of Margarita Island off Venezuela, women were perpetrators in half of the physically aggressive acts observed. Similarly, the extensive use of physical aggression by females has been described in Zambia and China (Glazer, 1992) and among the Zapotec of Mexico (Fry, 1992) and the Mundagamor of Papua New Guinea (Brannon, 1996).

Evidence of indirect aggression has also been reported in many non-Western cultures. For example, Hines and Fry (1994) using survey and ethnographic methods with 124 Argentine adults, report that women employ more indirect aggression than men, while men utilize more physical aggression than women. Using similar ethnographic methods, Fry (1992) reports that among the Zapotec of Mexico, females may use more indirect aggression than males. In a review of anthropological research on female aggression in 137 societies, Burbank (1987) describes a variety of ways that women use indirect aggression in these cultures, although she does not label the behaviors as indirect aggression.

A few of the psychological studies of aggression have studied indirect aggression cross-culturally. As shown in Table 2, only three of the prior studies of indirect aggression in children have used participants from more than one country (Osterman et al, 1994; Osterman et al., 1998; & Hart et. al., 1999). Of these three studies, only two of them assessed cultural differences in indirect aggression. Osterman et al. (1998) assessed gender differences in indirect aggression with a multi-cultural sample, consisting of 8, 11, and 15 year-old children from Israel, Poland, Finland, and Italy. The researchers found that indirect aggression was higher for girls than boys overall, but they did not compare the rates of indirect aggression across the four cultures. In contrast, Osterman et al. (1994) specifically analyzed the

cultural differences in indirect aggression between eight year-olds from five ethnic groups (African Americans, European Americans, Polish, Finnish-speaking Finnish, & Swedish speaking Finnish). Significant differences were found between ethnic groups for indirect aggression with African Americans scoring higher on indirect aggression than the Polish or Finnish samples. Most recently, Hart et al. (1999) studying preschool children from Russia, China and the U.S. found that the latent mean of relational aggression of girls was higher than that of boys across the three cultures; the gender differences in relational aggression, however, were only significant in the U.S. sample.

Other studies have assessed cultural variation in gender differences in indirect aggression by attempting to replicate the findings from U.S. samples in other cultures. One study of this type was conducted by Tomada and Schneider (1997, see Table 2), who assessed relational aggression in a sample of Italian elementary school children. They found that for teacher measures, boys scored higher than girls for both overt and relational aggression. These results contrast with those found by Crick & Grotpeter (1995). According to Tomada and Schneider, these contrasting findings suggest cross-cultural differences in indirect aggression and do not reflect methodological inconsistencies. Nevertheless, the possibility that methodological issues or age of the subjects may account for their results cannot be ruled out because gender differences in indirect aggression have been found in other cultures such as Australia (Owens & MacMullin, 1995), United Kingdom (Campbell, Sapochnik, & Muncer, 1997), and Finland, (Bjorkqvist et al., 1992). Therefore, there is at least some evidence of cross-cultural generalizability of the gender differences in indirect aggression.

Individualism and Collectivism

Despite the relative paucity of research on cultural differences in indirect aggression and the contrasting results, there has been some speculation about how patterns of aggression may vary across cultures. Researchers such as Hofstede (1997) and Triandis (1994) have discussed the concepts of individualism and collectivism as a way to conceptually divide cultures by their prevalent beliefs, values, and social norms. According to Triandis (1994), cultures high in individualism "structure social experience around autonomous individuals" while cultures high in collectivism "organize their social

experiences around one or more collectives, such as the family, the tribe, the religious group, or the country" (p. 2). Triandis also describes beliefs common of people from these two types of cultures. "Individualists think of themselves as autonomous, independent of groups, and believe that it is okay to do what they want to do regardless of their groups' wishes. Collectivists, on the other hand, tend to see themselves as "appendages or aspects of a group... and they are willing to subordinate their personal goals to the goals of the group" (p. 4) Individualism and collectivism can been conceptualized as opposite ends of a continuum (Hofstede, 1997).

Degrees of individualism have been found to vary significantly between cultures. Hofstede (1997) constructed an Individualism index (IDV) and assessed employees of IBM in 50 countries. United States had a rank score of 1 and a IDV score of 91 on a scale of 100. In contrast several of the non-Western cultures such as Hong Kong, Thailand, Indonesia, Pakistan, and Singapore. Guatemala and Equator scored very low on the Individualism Index. Although the results of the IDV are often cited as a means of rating various cultures' level of individualism, the sample used to construct the index may not be representative of the members of the countries rated by it (i.e., sample may be more highly educated).

Hofstede describes some of the key differences between individualist and collectivist societies. In collectivist societies, there is an emphasis on harmony and cohesiveness. Direct confrontations and conflicts are considered rude and improper. The importance of maintaining relationships prevails over the importance of specific tasks. In contrast, in individualistic societies speaking one's mind is valued and face to face conflicts are often expressed publicly. Hofstede (1997) has suggested that in individualistic societies importance of accomplishing tasks sometimes takes precedent over maintaining relationships.

There are a few conflicting speculations about the differences between individualistic and collectivistic cultures in their display of relational aggressive behaviors. Some researchers have stated that it appears that in more collectivist societies, the threat of exclusion or ostracism is a more normative means of regulating behavior for all genders than it is in more individualistic societies, which suggests that relationally aggressive behaviors may be more prevalent in collectivistic societies (Rosenthal &

Feldman, 1996). In contrast, Hart et al. (1999) suggest that in individualistic societies, since there may be fewer cultural pressures promoting relationally aggressive behaviors as a means of regulating behavior, relationally aggressive behaviors may be fostered in same gender relationships with peers.

This review reveals that very little is known about the display of indirect aggression in different cultures. In the present study, indirect aggression reported by U.S. and Indonesian children and adolescents will be compared. Because these two countries occupy extreme positions on the individualism/collectivism, as will be described in further detail in the section of Indonesian society, this comparison may be particularly useful in assessing the patterns of aggression that occur cross-culturally.

## Indonesian Culture

Although there have been several studies that assessed aggression cross-culturally (i.e., Australia, Great Britain, Finland, Italy, Israel, and Poland; see Table 2), the majority of these studies focused on cultures that rated high in individualism. Specifically, on the Individualism Index described by Hofstede (1997), out of the fifty cultures analyzed Australia ranks second, Great Britain rank third, Italy ranks seventh, Finland ranks seventeenth, and Israel ranks nineteenth in level of individualism. With the exception of the study by Hart et al., (1998) which studied children in China and Russia, the studies of indirect aggression have been conducted exclusively in individualistic societies. Hart and colleagues' 1999 study was conducted with preschoolers, and thus, there has not been a study of indirect aggression in middle childhood or adolescence conducted in a collectivist society.

Since research on collectivisitic orientation has suggested that the behaviors labeled as indirect aggression may be valued differently in collectivist societies, studying indirect aggression in a culture high in collectivism, such as Indonesia, is critical in attempting to assess the cross-cultural generalizability of the indirect aggression concept. Indonesia was chosen because it is a culture reported to be low in individualism as described by Mulder (1996). Specifically, in contrast to the U.S. which ranked number 1 out of the 50 cultures in individualism and had an IDV score of 91, Indonesia, tied for rank score of 47 out of 50 and had a IDV score of 14. Thus, whereas the U.S. was the most

individualistic culture studied, Indonesia was one of the least individualistic cultures studied. Similarly, French, Jansen, Fosco, Rianasari, Pidada, & Nelwan, (1999) found that Indonesian adolescents scored significantly higher than American adolescents on a measure of interdependence, while American adolescents scored significantly higher than Indonesia adolescents on a measure of independence.

Indonesian society exemplifies many aspects of a collectivist society. The issue of social harmony is of primary importance in Indonesia. Rude conduct, showing anger, shouting, or raging is strongly prohibited and is considered a sign of lack of culture, lack of self-control, and lack of inner strength (Magnis-Suseno, 1997). The Javanese, the largest ethnic groups of Indonesia, value conflict avoidance and, thus, avoid open confrontation in every situation. The Javanese term "*rukun*" exemplifies this ideal. To act according to *rukun* means "to endeavor, at all times, to repress signs of social or personal tension and to preserve the impression of harmonized social relationships as much as possible" (Magnis-Suseno, 1997, p. 43). Similarly, Javanese child-rearing practices emphasize the importance of acting according to *rukun* with other children, and learning to avoid showing emotions in public (Farver & Wibariti, 1995).

It is important to note that *rukun* refers to attainment of outward appearances of harmony within the group and not to internal attitudes or feelings about conflict. Neils Mulder (1996) suggested that while suppression of conflict is the norm, an expression of lack of conflict might hide true feelings and tensions. Significantly, the ability to speak about unpleasant matters in an indirect fashion is one of the most highly valued qualities in Javanese culture (Magnis-Suseno, 1997). Gossip, may sometimes be considered a socially appropriate means of releasing tension, especially for women (Mulder, 1996). In contrast to *rukun*, is *pamrih*, which means self-interest. *Pamrih* is viewed as socially disruptive because it means acting without consideration for social harmony.

The Sudanese are the second largest ethnic group in Indonesia. In contrast to Javanese society, Sudanese society has not been studied extensively. Consequently, the majority of the literature on Indonesia describes the Javanese society. In his anthropological study of Indonesia, however, Peacock (1973) stated that Javanese society is very similar to Sudanese society. The Sudanese have also been

found to be similar to the Javanese in many aspects of social behavior (Fredrick & Worden, 1993). One of the only reported differences between the Javanese and Sudanese, is that the Sudanese are more likely than the Javanese to follow the Muslim religion (Peacock, 1973). Therefore, although the sample in the present study is mostly Sudanese, we expect them to have many of the same features and values as that of the Javanese population. For purposes of clarity, references to Indonesia in the present study will be limited to the Javanese and Sudanese populations of Indonesia.

Although there is much evidence to suggest that Indonesian society is much different from the U.S. and other Westernized societies in terms of individualism, some aspects of the societies may be quite similar. French, Jansen, Rianasari, & Setiono (1999) found that Indonesian fifth grade children were similar to their friends in terms of social status, academic achievement, and antisocial behavior. These findings are consistent with the results of studies of friendship qualities among U.S. dyads (i.e., Ladd, 1983). It is unclear whether or not children who live in societies that differ in individualism and collectivism will differ in frequency of relational aggression or physical aggression. For physical aggression, it has been suggested that Indonesians display less physical aggression than Americans. Magnis-Suseno (1997) stated that physical aggression is strongly prohibited for all age groups. These social norms may prevent Indonesian children from displaying as much physical aggression as children from cultures such as the U.S. where physical aggression is less strongly prohibited. On the other hand, some forms of relational aggression, such as gossip, have been described as occurring frequently in Indonesian society especially among females (Mulder, 1996). It is unclear from the anthropological data, however, whether gossip is always perceived as having an intent to harm. Therefore, it is not clear if gossip can be labeled as aggressive in Indonesian society. It seems that, as in the U.S., gossip in Indonesia can be aggressive (malicious rumors) or non-aggressive (spreading of news before the validity of the news is known).

## Methodological Issues in Studying Relational Aggression

Perhaps the differences in the results of the studies in Table 2 may be explained by methodological differences between the studies. A major distinction between the studies is whether indirect aggression was assessed via self or other reports or by observation. Methodological problems are apparent in each of these methods. As reported in Table 2, the majority of prior research on indirect aggression has utilized questionnaires, but interviews and behavioral observations have also been used to assess different types of aggression in children.

Three types of questionnaires—self-report, peer report, and teacher report, have frequently been employed. Each of the questionnaire types has advantages and disadvantages. Self-report questionnaires, such as those used by Campbell et al, (1997) have a number of disadvantages in the study of relationally aggressive behaviors. First, some children may not be aware that social exclusion behaviors are even aggressive. Also, children who realize that these behaviors are aggressive may feel that they are not socially acceptable and therefore, refuse to report them (Bjorkqvist et al., 1992). On the other hand, self-report measures may be beneficial in assessing children's subjective beliefs about the aggression types they think are most harmful and most normative in their peer group (Crick et al., 1996).

Peer report measures, such as peer nominations of aggression, have been used more extensively than self-report measures. Such instruments have been developed for preschool, middle childhood, and late adolescence (Crick et al., 1999). Peer nominations involve asking children to nominate peers (usually in a classroom) who fit behavioral descriptions. One advantage of peer report measures is that they allow children's perceptions of others' behaviors to be measured without teachers' or observers' perspectives filtering the data. Crick and Grotpeter (1995) have also suggested that peer reports are beneficial because they include information about behaviors that occur in multiple settings and in locations in which teachers or other adults are not present. A disadvantage of using peer report measures is that existing group reputations or stereotypes about the children being judged may bias peer reports and, therefore, fail to accurately assess the actual behaviors of the child (Bronfenbrenner & Ricciuti, 1960).

Peer report interviews have also been used to study indirect aggression. There have been two types of interviews employed to study indirect aggression, those which elicit information about indirectly aggressive behaviors specifically (i.e., "Does she ever tell you that you cannot play with her group of friends?") and those which ask about aggressive behaviors in general (i.e., "What does he do to be mean?") Among the studies in Table 2 which employed an interview methodology, the majority used interviews which specifically asked about indirect aggression (i.e., Lagerspetz et al., 1988, Bjorkqvist et al., 1992; & Osterman et al., 1994). In many of these studies, interview format was used to obtain the answers to a questionnaire with groups of participants in which pencil and paper format questionnaire was deemed inappropriate.

In two of the studies in Table 2, however, interviews were conducted to elicit information about aggression in general without specifically prompting the children to report about indirect aggression. Crick, Bigbee, and Howes (1996) utilized an open-ended interview that asked third through sixth grade children to describe angry or harmful behaviors that occur most often in their peer groups. In their second study Crick et al. (1996) asked similar questions such as, "what do boys do when they want to be mean to another boy?" Content analysis was used to generate a coding scheme that included a category for relational aggression. Similarly, Cairns et al. (1989) also used an interview format that avoided any references to specific types of aggression. Instead, the researchers asked the children to describe two recent conflicts with peers. Interview data was content analyzed and the frequency of physical aggression and social ostracism was calculated. The interview data was used to assess the frequency of each type of aggressive strategy throughout the longitudinal study.

Teacher report measures have been frequently utilized, especially with the preschool-age population. Teachers as can provide information about preschoolers' behavior at an earlier age than children may be accurate informants about themselves or their peers (McNeilly-Choque, Hart, Robinson, Nelson, & Olsen, 1996). This advantage has been qualified recently by the finding that preschool-age children are able to differentiate between overt and relational aggression (Crick, Casas, & Mosher, 1997).

A disadvantage with the teacher report method, however, is that the teachers' own perceptions of relational aggression and normative behavior may bias the data, and the teachers may not perceive the behaviors in a manner similar to the way the children's peers do (McNeilly–Choque et al., 1996).

In general, cross-informant convergence rates for the different type of self and other report measures have varied widely, which make it difficult to generalize about the validity of these measures for aggression research. Cross-informant agreement between self-rated and peer-rated indirect aggression has been found to be low (Crick et al., 1999). Bjorkqvist et al. (1992), for example, found a relatively weak correlation between these two measures for both genders in their study of 8 ,11, and 15 year-olds. Teacher and peer ratings have been found to have higher correspondence rates. In a study of U.S. preschool children, Crick and her colleges (1997) found moderate degrees of correspondence between teacher and peer rated overt and relational aggression, but cross-informant convergence was significant only for girls, not boys. Several studies of school-age children's relational aggression have indicated that teachers' and peers' assessments of relational aggression are significantly related and have provided evidence for the reliability and validity of both types of questionnaires (e.g., Crick, 1996; Crick & Grotpeter, 1995; Grotpeter & Crick, 1996). In contrast, Tomada and Schneider (1997) studied relational aggression among Italian school-aged children, and found a very poor concordance between teacher reports and peer-report measures. These contrasting results raise questions as to whether peers and teachers have different perspectives on this issue cross-culturally or if there are problems with the reliability and validity of these measures for cross-cultural studies. Possibly, a combination of these issues may explain the results. Therefore, given the inconsistencies in concordance rates, it is difficult to evaluate which questionnaires are useful methods to assess relational aggression.

Despite the variation in concordance rates between types of questionnaires, results of factor analyses have indicated that items assessing relational aggression comprise a factor distinct from physical and verbal aggression. This has been found for both peer assessment instruments (i.e. Crick & Grotpeter, 1995; Bjorkqvist et al., 1992) and teacher assessment instruments (i.e. Tomada & Schneider, 1997; Hart et al., 1999). Thus, the factor analyses have yielded replicable factor structures across several

independent samples. Crick and her colleagues also state that their peer nomination measure of relational aggression has been demonstrated as being internally consistent (Crick, 1996; Crick & Grotpeter, 1995). Self-report measures have been used infrequently, and, thus, their validity and reliability has not yet been determined.

Behavioral observation is another method used to study indirect aggression. Galen and Underwood (1997) used observation for one of their studies and concluded that elements of social aggression can be reliably coded in laboratory observations. It is important to note, however, that Galen and Underwood's definition of social aggression included negative facial expressions and gestures that may be more readily observed than the behaviors defined by Crick and her colleges as relational aggression. Also Galen and Underwood's observational method was only used for a sample of girls.

Despite Galen and Underwood's use of observational measures for one aspect of their study, researchers have listed many disadvantages to the observational method. First, observers themselves may perceive the behaviors differently than the children do. Also, observers typically are only exposed to restricted samples of behavior that occur within the specific context and limited time intervals of the observation (Bronfenbrenner & Ricciuti, 1960). It may also be difficult to detect indirect aggression through behavioral observation because some of the behaviors (i.e., social exclusion or being friends with someone else in revenge) may be covert and thus, difficult or impossible to reliably observe in a naturalistic setting (Crick & Grotpeter, 1995). McNeilly-Choque et al. (1996), for example, found that there was only a very small correlation between observed relational aggression and peer and teacher ratings of relational aggression. For girls, observational ratings and peer reports of relational aggression were not significantly correlated.

Although frequently used, the methodological procedures used to assess indirect aggression have caused some concern among cross-cultural researchers. First, the majority of studies on indirect aggression in children have used questionnaires or structured interviews that were based on questionnaires. Significantly, most of the questionnaires used for the studies have been developed with

data from Western populations (e.g., Crick & Grotpeter, 1995; Lagerspetz & Bjorkqvist, 1994). This has led some researchers to wonder whether these questionnaires are accurately measuring aggressive behaviors or alternately measuring gender stereotypes of aggressive behaviors from Western cultures (Brannon, 1996). This concern arises because questionnaires may prompt children to think of certain types of aggression instead of evaluating what the children would consider aggression without any prompts (Crick et al., 1996).

In order to alleviate the problems associated with monomethod bias, in this case the emphasis on questionnaire data, Tomada and Schneider (1997) suggest that multiple methods should be used in assessing cross-cultural differences in relational aggression. Recently, Crick et al. (1999) suggested that "qualitative research methods (i.e., open-ended questions and observation) will be necessary in order to define the possibly unique character of relationally aggression" in the different cultures studied (p. 104). The proposed study is being conducted to specifically address this issue. Following the trend for multi-method assessment in psychology and given that Crick et al., (1996) and Cairns et al. (1989) have used open-ended interviews for the assessment of relational aggression in a U.S. sample, the current study will extend the use of an open-ended interview technique cross-culturally to the study of relational aggression.

## Present Study

The data in the present study were collected as part of a larger series of studies of friendship qualities conducted by Doran French and colleagues (French et al., 1999). A new coding system was developed and utilized to assess the descriptions of indirect aggression by male and female fifth graders and eighth graders.

A central question of the present research is whether there are interaction effects such that gender differences are more apparent at adolescence than during childhood, and/or whether these differences generalize across cultures that differ with respect to individualism and collectivism. I previously referred to all the different conceptualizations of relationally aggressive behavior and related concepts as indirect

aggression in the literature review. The present study, however, assesses relational aggression as defined by Crick & her colleagues (Crick & Grotpeter, 1995, Crick et al., 1996; Crick et al., 1999). That is, in this study a variant of the free description interview method used by Crick et al. (1996) and Cairns et al. (1989) is employed. Specifically, participants are asked to describe characteristics of disliked peers. These descriptions are then coded for references to physical, verbal, and relational aggression. This methodology is particularly appropriate because it neither makes assumptions about the types of aggressive behavior that was reported, nor prompts subjects to report such behavior.

There are, however, some disadvantages with the use of a free description methodology for assessing aggressive behaviors. This method confounds two aspects of the behavior, the actual prevalence of the aggression and the salience of the aggression. Such a confound may be particularly problematic with cross-cultural study, where culture-specific expectations and prohibitions of such behavior may affect the reporting of the behaviors. Weisz , Chaiyasit, Weiss, Eastman, & Jackson (1995) addressed this issue in their study of Thai and American children's problem behavior. They found that teacher ratings (questionnaires) of problem behavior showed a highly significant U.S.-Thai difference, with Thai children showing much higher problem behavior scores (i.e., indicating verbal and physical aggression ) than U.S. students. When assessed using structured observations, the opposite pattern emerged, with Thai children showing significantly lower problem scores than U.S. children. Weisz and McCarty (1999) suggest that the expectations of what is considered above normal levels of externalizing behaviors may be based on different cultural expectations, and thus, lead to inaccurate reports of frequency of different behaviors. Thus, a similar problem may occur in the present study, whereby individuals may describe disliked peers as engaging in aggression either because the behavior is frequent or because the behavior, although infrequent, is particularly noticeable or socially unacceptable.

## Hypotheses

### Gender Main Effects.

There will be main effects for gender for both physical and relational aggression. The following gender main effects are predicted:

1. Males will report more physical aggression than females for both age groups. This prediction is consistent with the review of Maccoby and Jacklin (1974).

2. Females will report more relational aggression than males. This hypothesis is consistent with the findings of the majority of the prior studies on gender differences in indirect aggression (see Table 2).

Due to the inconsistency of gender differences in verbal aggression described in the literature, no specific main effects of gender for verbal aggression have been developed.

Developmental Main Effects.

It is hypothesized that a significant developmental effect will emerge. Specifically, the following developmental main effects are predicted:

1. Physical aggression will be less prevalent in adolescents than in children. This prediction is consistent with the results of the many studies reviewed by Parke and Salby (1987) that suggest that there is a drop in physical aggression from childhood to adolescence.

2. Verbal aggression will be more prevalent in adolescents than in children. This predication is consistent with the findings of Bjorkqvist et al. (1992).

3. Relational aggression will be more prevalent in adolescents than in children. This prediction is consistent with Lagerspetz and colleagues (1992 ) theory that relational aggression increases as verbal and social skills develop in adolescence. Although the results from prior studies are mixed, several researchers have found that indirect aggression increases with age (i.e., Lindeman, Harakka, & Keltikangas-Jarvinen, 1997; Cairns et al. 1988).

Developmental by Gender Interaction Effects.

1. It is hypothesized that the main effect of development for relational aggression (see Hypothesis 2 under Gender Main Effects) will be more pronounced in females. This prediction is consistent with the findings of Cairns et al. (1989) and Bjorkqvist et al. (1992) who found that in females, indirect aggression increased dramatically during adolescence. With respect to males, there

have been inconsistent findings about their developmental trends in relational aggression, and therefore, no specific directional hypotheses can be made.

Cultural Effects.

There are no specific directional hypotheses for main effects of culture. However, it is expected that the hypothesized gender and developmental main effects will replicate across both cultures. Due to the scarcity of the data on relational aggression in collectivist societies, there are no predictions regarding the main effect for culture. It is possible that since relational forms of aggression may be used as a means for social control in Indonesia as Rosenthal and Feldman (1996) have suggested is the norm in China. If so, than relational aggression may occur relatively frequently in Indonesia as well. Mulder (1996) and Magnis-Suseno (1997) stated that indirect means of releasing tension are frequent in Indonesia, yet it is unclear if this refers to relationally aggressive acts. It is also unclear in the literature whether there will be a main effect for physical aggression. According to Magnis-Suseno (1997) physical confrontation is prohibited for all ages in Indonesian society. However, there is no evidence that levels of aggression (either physical, verbal, or relational) in Indonesian children and adolescents differ from those of children and adolescents in America.

Since, it is not clear how the cultural norm of social harmony in Indonesia will function in determining the perceived negativity or salience of aggressive behaviors, we are not able to form specific hypotheses about how Indonesian children will report aggression in their disliked peers. As Weisz and McCarty (1999) have suggested, cross-cultural differences in reporting externalizing behaviors may either reflect underlying differences in the frequencies of behaviors or reflect different norms and expectations about what is considered appropriate. Therefore, it is difficult to hypothesize how frequently Indonesian children will report aggressive behavior, even though past research has suggested that aggression among schoolchildren is less accepted by Indonesian adults than by American adults (Mulder, 1996).

## Methods

Participants

An Indonesian sample and a U.S. sample contributed data for this study. In both countries, children from schools that served predominantly middle class populations were selected for participation.

The Indonesian data were collected previously by Meta Rianasari, Sri Pidada, and Peter Nelwan at Padjadjaran University in Indonesia. The Indonesian participants consist of 60 fifth grade students (30 males and 30 females) and 60 eighth grade students (30 males and 30 females). The ages of fifth graders in the Indonesian sample ranged from 9.75 to 11.75 ($M$ = 10.52), and the ages of the eighth grade students ranged from 12.75 to 16.1 ($M$ =13.7). All Indonesian participants were recruited from public schools in Bandung. Bandung, the capital of Sudanese culture, is located on the island of Java (Peacock, 1973). With a population of over 2 million, Bandung is the third largest city in Indonesia. In this urban center lie many Universities and textile manufacturing companies.

Based upon the occupations and education level of the participants' parents, the Indonesian sample was middle class. Fathers' occupations were diverse and included university lecturers, public school teachers, civil servants, physicians, army officers, as well as tailors and drivers. The majority of mothers did not work outside the home (70%) with the remainder possessing occupations similar to those of the fathers. Mothers' and fathers' education ranged respectively from 18.1% with four or more years of college, 33.5% with a high school education, and 43.2% with less than a high school education. Approximately half of the participants were Sudanese with the reminder identifying themselves as either Javanese or of unspecified Indonesian ethnicity. All the participants described themselves as Muslim.

The U.S. sample consisted of 50 fifth grade students (25 males and 25 females) and 55 eighth grade students (29 males and 26 females). The fifth grade students ranged in age from 10.58 to 11.92 ($M$ = 11.35), and the eighth grade students ranged in age from 13.17 to 15.42 ($M$ =14.21). All of the U.S. participants were European-American, with the exception of two for whose ethnicity was unknown. The U.S. participants were recruited from public schools (four elementary schools and one jr. high schools) in a medium sized Midwestern community that is a center for university education, manufacturing, and insurance.

The United States sample was also middle class and diverse income. Seventeen percent of the participants reported that their household income was below $40,000 a year, while 51% reported that their income was above $60,000 a year. Only limited demographic information was available for the U.S. sample.

Interview Process

Semi-structured open ended interviews were employed in the French et al. (1999) study. Common procedures were used in the U.S. and Indonesian samples.

At the start of the interview, each participant was asked to give the first name of two same-sex liked peers and two same-sex disliked peers. Same-sex peers were selected for this study based on the findings that children and early adolescents typically engage in more interactions with same-sex peers (Schaffer, 1994). Five open-ended questions were then asked about the first child the participant had named. This procedure was repeated for the remaining three children that the participant had named. The interview questions included: (a) "Now I would like you to tell me about (insert name of liked or disliked peer that is being discussed). Tell me why you like (or dislike) this person." (b) "Is there anything about the way this person behaves with you that makes you like (or dislike) him/her?" (c) "Is there anything about the way that this person behaves with other kids that makes you like (or dislike) him/her?" (d) Is there anything about the way this person looks or dresses that makes you like (or dislike) him/her?" (e) "Is there anything about the way this person acts with adults (e.g., parents or teachers) that makes you like (or dislike) him/her? Interviewers were trained to adhere to the interview protocol without using any prompts during the initial phase of the interview. After the participants answered all the questions the interviewers used the prompt, "What do you mean by _____?," in order to clarify any ambiguous statements that the participant may have used in answering the questions (i.e., "He is mean"). Undergraduate researchers conducted the interviews in both countries, and each interview lasted approximately twenty minutes.

Coding System

A coding system was generated for the present study, modeled after the coding system developed by Crick and her colleagues to assess relational aggression in a pilot study (Crick et al., 1996) and the peer nomination instrument that Crick and her colleagues have found to exhibit reliability and validity (Crick, 1996; McNeilly-Choque et al., 1996). Factor analyses of the items on this peer nomination measure have consistently yielded a separate factor for relational aggression (Crick et al., 1999).

In a recent review, Crick and her colleagues (1999) subdivided aggression into relational, physical, and verbal subtypes. Similarly, in the present study the participants responses were coded for the presence or absence of the following: (a) physical aggression; (b) verbal aggression, which included verbal insults (e.g., "You are an idiot") and verbal threats (e.g., "I'm going to beat you up"); and (c) relational aggression. Three subcategories of relational aggression were developed (relationship manipulation, social ostracism, and malicious rumors) based on the codes that Crick and her colleagues have used (see Appendix for complete coding manual).

Preliminary analyses of the data focused on calculating the frequencies that each code was used. Due to extremely low frequency of usage for verbal threats code (n=3), the verbal threats category and the verbal insults category were combined to form the broader category of verbal aggression for the statistical analyses. The combined frequencies of the physical aggression code are reported in Table 4.

Procedure

The following procedure was used by French et al. (1999). Permission from the government, public schools, and parents was obtained to conduct the Indonesian portion of the study. Students were interviewed at their school during non-school hours by a group of undergraduate researchers. Students in five elementary schools and two junior high schools were interviewed. The students were asked the five interview questions and their responses were recorded by the interviewers. The interviews from the Indonesian sample were transcribed and translated into English by Indonesian researchers fluent in both

languages. Each participant was assigned an identification number to ensure anonymity. The transcripts were then sent to the U.S. where U.S. research assistants coded them. Inter-rater reliability was calculated.

The U.S. students were recruited by sending a letter to all parents in three elementary schools and one junior high school, requesting participation. Those students who returned a prepaid postcard were called and an interview was scheduled. Prior to the interview both a parental permission form and a student consent form was completed for each participant. Each participant was assigned an identification number to ensure confidentiality. These identification numbers were the put on the transcripts instead of names and only the primary investigators had access to the room where the list of participant names and ID numbers was stored. Participants were assured that they could choose not to answer any question or stop the interview at any time and confidentiality was assured. The interviews were conducted individually by undergraduate researchers during non-school hours at either their school or a university laboratory. Upon completion of the interview, students were given a small gift (a university T-shirt, baseball cap, or five dollars) for participating. The U.S. interviews were transcribed verbatim in the laboratory by the interviewers and all coding was done from these transcripts.

In the current study, two undergraduate volunteer research assistants from Illinois Wesleyan University independently coded the data using the coding manual. The author trained the coders to use the coding manual, and instigated a series of practice sessions. Reliability between the coders was assessed in the practice session by calculating the number of time both coders used the same code and the number of time the coders used different codes for an item. Based on these analyses, the coding system was modified slightly in order to clarify the definitions of certain codes. When the coders had reached 90% inter-rater reliability in the practice sessions, they were each given the entire set of transcripts to code independently.

After the data was coded, inter-rater reliability was assessed by determining the percentage of times both coders used the same code for an item (an agreement), as well as the percentage of instances

where the coders used discrepant codes for an item (a disagreement). Then percent agreements and Kappa statistics were calculated for each code (i.e., physical aggression, verbal aggression, etc.), by determining the number of times that the coders disagreed about the usage of each particular code. One hundred percent of the transcripts were coded by each coder and used in the calculation of reliability. As shown in Table 3, the inter-rater reliability rates were extremely high with all codes having a percent agreement of 99%. The Kappa's ranged from .956 to .991.

## Results

In all cases, the dependent variable is the presence or absence of a type of aggression provided in a description of a disliked peer. The usage of each code in the participants' descriptions are reported for gender, grade, and country in Table 4. These include the number of persons for whom a code is used and the percentage of the population for which it is used.

These data were analyzed using hierarchical logistic regression. Logistic regression is a statistical analysis used to predict the relationship between predictor variables and a dependent variable, when the relationship between the predictors and predicted values are assumed to be nonlinear. Logistic regression overcomes the critical disadvantages of linear regression for dichotomous dependent variables (Wright, 1998). This was an appropriate procedure because there were dichotomous dependent variables in this study (e.g., presence or absence for each code) and dichotomous independent variables (e.g., grade, gender, and country) (Pedhazur, 1997). Five separate hierarchical logistic regression analyses were conducted, one for each of the dependent variables (physical aggression, verbal aggression, social ostracism, relationship manipulation, and malicious rumors).

Analyses were conducted in two steps. In step one, main effects of the three predictor variables (i.e., gender, country, and grade) were entered. In step two, the three two-way interactions (Gender by Grade, Country by Grade, and Country by Gender) and the three-way interaction (Gender by Country by Grade) were entered. The results of the interactions were tested and reported only if the addition of the

block significantly increased the prediction of the model, as indicated by a significant change in chi-square score ($\Delta X^2$).

Odds ratios, the probability of an event occurring compared to the probability of the event not occurring, are fundamental to logistic regression. In the analyses results tables, odds ratios are reported for main effects. Because odds ratios cannot be interpreted for interactions, they are not reported.

Alpha levels were set at .01 in all analyses for two reasons. First, this conservative alpha level reduced the experimentwise error rate (type I error) since there were multiple comparisons. Secondly, the size of the sample was sufficient to detect even small effects at the .01 level.

Physical aggression

The contribution of the three main effects entered in step one was significant ($\Delta X^2$=133.19, $p$<.001). As shown in table 5, there was a there was a significant main effect for gender ($z$ = -9.718, $p$ < .001) with more males (84.4%) reporting physical aggression than females (17.6%). There was also a significant main effect for grade ($z$ = 2.823, $p$ < .01) with more fifth graders (55.8%) discussing physical aggression than eighth graders (44.2%). Finally, a significant a main effect for country emerged, ($z$ = 3.040, $p$ < .001) with more Indonesians (61.8%) reporting physical aggression than Americans (38.2%). The addition of the interaction terms in the second block had a non-significant effect ( $\Delta X^2$ = 5.870, $p$ < .2091). Thus, the interaction terms were not analyzed further.

Verbal aggression

The contribution of the three main effects entered in step one was not significant ($\Delta X^2$ = .066, p = .996). As shown in table 6, there were no significant main effects of gender, grade, or country. Thus, U.S. and Indonesian fifth and eighth grade male and females did not significantly differ in the number of times they discussed verbally aggressive behaviors. Similarly, the second block was also non-significant ($\Delta X^2$ = 4.96, $p$ < .29). Therefore, the interaction terms were not analyzed.

Relationship manipulation

The three main effects entered in step one made a significant contribution to the model ($\Delta X^2$ = 26.29, $p < .001$). As shown in table 7, there was a significant main effect for gender ($z = .354$, $p > .001$) where more females (79.6%) discussed relationship manipulation than males (20.4%). There were no significant main effects for grade or country. The addition of block 2 was not significant ($\Delta X^2 = 5.861$, $p = .210$), and the interactions were not analyzed.

Social ostracism

The contribution of the three main effects entered in step one was significant ($\Delta X^2 = 53.58$, $p < .001$). As reported in table 8, a significant main effect for gender ($z = 6.242$, $p < .001$) did emerge, with more females (85.0%) reporting social ostracism than males (15.0%). There were no significant main effects for grade or country. The addition of block two was not significant ($\Delta X^2 = 9.63$, $p = .047$), and the interactions were not analyzed.

Malicious rumors

The addition of the three main effects in step one was significant($\Delta X^2 = 23.62$, $p < .001$). As shown in Table 9, with block one added, a significant main effect for gender emerged ($z = 4.361$, $p < .001$) with more females (71.4%) reporting malicious rumors than males (28.6%). There were no significant main effects for grade or country. The addition of the four interaction terms in block two was also significant ($\Delta X^2 = 14.23$, $p = .007$). Therefore, the interaction terms did make a significant contribution to the predictive capacity of the model, and the variables in step two were analyzed.

In step two, as in step one, a significant main effect for gender emerged; females reported malicious rumors significantly more than males ($z = 3.490$, $p < .001$). There were no significant main effects for either grade or country, as in block one. Similarly, none of the two-way interactions were significant. The three-way interaction (Gender by Grade by Country) was significant ($z = 3.172$, $p < .01$). Frequencies and percentages of reports of malicious rumors by male and female fifth and eighth graders divided by country are shown in Table 10. As shown in the table, for all groups, with the exception of U.S. fifth graders, females reported malicious rumors more often than males. Within the

U.S., it appears that malicious rumors are described predominantly by eighth grade girls. Within Indonesia, it appears that malicious rumors are described predominantly by both fifth and eighth girls. The frequencies indicate the interaction may be an ordinal interaction.

After a preliminary analysis of frequencies of the malicious rumors codes, a formal analysis was conducted breaking down the sample by country. In order to interpret the three-way interaction, an additional regression analysis was computed. The file was split by country with gender and grade predictor variables entered in the first block and the two-way interaction entered in the second block. Within both the Indonesian and U.S. samples, a simple main effect of gender emerged (Indonesia, $z = 3.360$, $p < .001$; U.S., $z = 2.819$, $p < .01$). The second block (containing the Gender by Grade interaction) was not significant for either the Indonesian ($\Delta X^2 = 4.466$, $p = .0346$) or the American ($\Delta X^2 = 5.916$, $p = .015$) sample. Thus, it appears that the three-way interaction for malicious rumors does not compromise the interpretation of the main effect of gender.

## Discussion

The present study was designed to assess gender, developmental, and cultural differences in the types of aggressive behavior that children mention in their descriptions of disliked peers. The predicted gender differences in physical and relational aggression emerged.

As predicted, gender differences were found for physical aggression and these differences were seen in both the U.S. and Indonesian samples. These findings are consistent with the large body of literature on physical aggression in which it has been found that males exhibit more physical aggression than females (i.e., Maccoby and Jacklin, 1974). Similarly, in the present study, males in both countries mention physical aggression more often than females when describing a disliked peer.

No gender main effects for verbal aggression emerged. This is consistent with the findings of several studies reviewed by Maccoby and Jacklin (1980). It is inconsistent with the findings of Bjorkqvist et al, (1992) who found that even when distinguishing verbal aggression from indirect aggression, males displayed more verbal aggression than females, at least in elementary school.

Consistent gender differences in relational aggression were also found. Gender differences emerged for three relationally aggressive behaviors (social ostracism, relationship manipulation, and malicious rumors) across countries. The finding that females discuss relational aggression more than males is consistent with the findings of the majority of prior research on relational aggression in the U.S. and Finland (i.e., Lagerspetz, Bjorkqvist, & Peltonen, 1988;Cairns et al., 1989; Crick & Grotpeter, 1995). From the present analysis of the data, it is not apparent if the same peers are described as exhibiting all three relationally aggressive behaviors. In order to assess the construct coherence of relational aggression, an analysis will be conducted to assess the extent to which disliked individuals described as exhibiting one type of relational aggression are also described as using others.

Overall, few developmental effects were found in this study. As expected, fifth graders described physical aggression significantly more often than eighth grade students. This finding is consistent with the many of the studies of physical aggression reviewed by Parke and Salby (1987) that found physical aggression decreases during the period from childhood to late adolescence. Similarly, our results are also consistent with Cairns et al.'s (1989) longitudinal study in which they found that physical aggression declined from early to middle adolescence. It is important, however, to note that we were not assessing the frequency of physically aggressive behavior, but rather the frequency of describing physical aggression as a reason for disliking a peer. Consequently our data cannot be used to assess developmental differences in frequency.

In contrast to my hypothesis, a developmental main effect for verbal aggression, with eighth graders reporting more verbal aggression than fifth graders, did not emerge. This finding is inconsistent with the findings of Bjorkqvist et al. (1992).

The results also failed to support my hypothesis that adolescents would discuss relational aggression more often than children. There were no significant developmental main effects for any of the relational aggression variables. The hypothesized developmental increase in relational aggression was based in part upon the findings of Bjorkqvist et al. (1992) who suggest that relational aggression levels may follow a developmental progression. The results of the present study do not provide support for

Lagerspetz and colleagues' (1992) theory of relational aggression that contends that adolescents have the cognitive and linguistic capability to use relational aggression that children have not yet developed. The present study, however, did not assess the frequency of relational aggressive behavior in each age group. Thus, although the results suggest that adolescents may not describe their disliked peers as relationally aggressive more often than children, Lagerspetz et al.'s developmental progression hypothesis was not directly tested in this research.

It was predicted that a gender by developmental interaction would occur; eighth grade females were expected to describe disliked peers as relationally aggressive more often than fifth grade girls, while no such developmental increase was expected for males. This interaction did not emerge. The hypothesized interaction was originally developed on the basis of the longitudinal study of Cairns et al. (1989) in which increases in social ostracism were found for girls, but not boys. In addition, Bjorkqvist et al. (1992) also found increases in indirect aggression for females in the period from childhood to adolescence. It should be noted again, however, that frequency of relationally aggressive behavior could not be assessed with the methodology used here.

No specific hypotheses with respect to country differences in the U.S. and Indonesian participants were developed because it was unclear how cultural difference would impact the participants' descriptions of their disliked peers. The only country effect to emerge was that Indonesian participants were more likely than U.S. participants to describe their disliked peers as physically aggressive. It has been hypothesized by some anthropologists that aggression is less accepted in Indonesian society than it is in most of the Western cultures since Indonesians adhere to the concept of rukun as I described earlier (Mulder, 1996). As Triandis (1994) has described, cultures vary in their acceptance of physical aggression. As noted earlier, however, it is very difficult to interpret the cross-cultural data because of the difficulties in separating measures of aggression's occurrence from its salience.

These difficulties in separating occurrence from salience of behavior in cross-cultural studies have been articulated by Weisz and his colleagues. In one study Weisz, Suwanlet, Chaiyasit, Weiss,

Achenbach, & Walter (1987) found that there were significant differences reported between U.S. and Indonesian parents on their children's problem behaviors. It is possible, however, that this does not reflect an elevated level of problem behaviors in the Thai sample, but rather that Thai parents used a different "culturally mediated standard of comparison" than American parents. This idea has been supported by studies indicating that these cultural effects are not replicated when direct observation of the children's behavior is conducted by outside observers (Weisz et al., 1995). One possible explanation for the finding in the present study that Indonesians reported more physical aggression than U.S. participants is that if physical aggression is less socially acceptable in Indonesia than in the U.S., then it is possible that it would be more salient to Indonesian students. If so, they may refer to it more often in their descriptions of disliked peers than would Americans, regardless of the frequency that it occurs.

As expected, however, the gender effects did replicate across the two cultures for all three codes of relational aggression. The developmental effect for physical aggression also replicated across cultures. Notably, there were no country main effects for relational aggression. This finding suggests that relational aggression is occurring in both countries and that it is a salient reason for children of both cultures to dislike their peers.

Not only were the results of this study consistent with the majority of the hypotheses and prior research in the field, but the study's findings can also be used to address several methodological issues in the study of relational aggression. Since there have been so many studies on physical aggression utilizing a wide variety of observation, questionnaire and interview methodologies, the consistency of our results with the gender effects found in these studies helps to validate our methodological procedure. Assessing gender differences in physical aggression served as a control for this new methodology. The consistency found between gender differences in physical aggression in the literature and those of our study, suggests that this method may be appropriate for assessing gender differences in relational aggression as well.

The present study was one of the first studies to use open-ended, semi-structured interviews to assess relational aggression. The results are consistent with the majority of studies of relational aggression which have relied on questionnaire methods (i.e., Crick & Grotpeter, 1995; Crick 1997). One

of the major criticisms about questionnaire methods in general, is that they may prompt children to report about behaviors that they would not otherwise spontaneously describe (Bronfenbrenner & Ricciuti, 1960). Our study did not prompt children to think about or report relational aggression, yet we found relational aggression to be prevalent in the participants' descriptions. These findings suggest that that the prior findings regarding gender differences in relational aggression are not likely to be an artifact of the questionnaire methodology.

Although the free description interview methodology was able to eliminated some of the elements of questionnaire methodology that are often criticized, it is not without limitations. One major limitation of this study is that we only assessed the frequency that aggressive behavior was mentioned in descriptions of children and adolescents' disliked peers. This cannot be interpreted as a measure of the frequency of the behavior's occurrence, as I mentioned before. As Weisz and colleagues (1995,1999) have suggested, cultural expectations about the norms for certain behaviors may influence the reporting of such behaviors to a greater degree than the actual frequencies of the behaviors. Since frequency and salience of the behaviors are confounded in this study, there is no way of unambiguously interpreting the results as being a function of frequency of aggressive behaviors, salience/cultural expectations of aggressive behaviors, or some combination of the two. Thus, as Weisz et al.'s (1995) findings indicate, observational research is needed in order to better understand the possible discrepancies between actual frequency and negative salience of these behaviors.

The present study also expanded the cross-cultural research on relational aggression. Since relationally aggressive behaviors were used to describe disliked peers by a significant number of the students from both cultures, it seems that relational aggression may be an important component of aggression and play a role in how children choose to dislike certain peers cross-culturally.

Although cross-cultural similarities were found for all types of relational aggression in the present study, it is not appropriate to assume that relational aggression is exactly the same in both societies. Researchers studying physical aggression, for example, have found that levels of such behavior and the way they are expressed and their social acceptance varies greatly between cultures

(Triandis, 1994). Similarly, it is possible that relationally aggressive behavior may also vary between cultures. Some anthropologists have suggested that relationally aggressive behaviors may play different social roles in the U.S. and Indonesia. For instance, anthropologists have suggested that gossip in Indonesia is an important agent of social control that is used, especially by women, to ensure social conformity (Mulder, 1992). In contrast, in the U.S. gossip may be viewed as a more negative behavior, and not as an important regulator of behavior.

The level of analysis of the present study only addressed whether or not the participants would describe disliked peers as using relational aggression. However, the study did not address the context in which the relationally aggressive behavior occurs, the social function of the behavior, or the consequences of exhibiting relationally aggressive behavior. At this more behavior-specific level of analysis, cross-cultural differences in relational aggression may become evident. Therefore, a more fine grained analysis of relational aggression would help to address such issues. Similarly, it is not clear whether the Indonesian victims of relational aggression interpret the behaviors as negatively as American victims do (Crick & Grotpeter, 1995). The emotions invoked in such situations have yet to be researched. Thus, future research on how relational aggression functions cross-culturally is needed before the similarities between youth in the U.S. and Indonesia found in the present study can be understood.

In addition, as with any cross-cultural study, comparability of samples is an issue here. Cross cultural research has always confronted what Segall, Dasen, Berry, and Poortinga (1990) call "the virtual impossibility of obtaining samples from more than one society that are truly comparable," and the present study was no exception (p. 62). The participants were selected in an attempt to get comparable Indonesian and American samples; both samples were from the middle class, and all the students were being educated in public schools. Despite the efforts to obtain comparable samples, the resulting samples had some differences. Although both samples were selected from public schools that serve middle class populations, it is likely that the Indonesian participants were more likely to have a more privileged background than the majority of Indonesians, while this was not true of the American sample. This is a function of the difference in the middle classes between the cultures. In Indonesia, the middle class

contains a small percentage of the population and is close to the top of the socio-economic strata. In America, in contrast, the middle class contains a larger percentage of the population and is located more centrally in the socio-economic strata. Thus, the obtained cultural differences and similarities between these countries must be considered with this in mind.

References

Archer, J.& Westeman, K. (1981). Gender differences in the aggressive behavior of schoolchildren. British Journal of Social Psychology, 20, 31-36.

Bjorkqvist, K. (1994). Gender differences in physical, verbal, and indirect aggression: a review of recent research. Gender Roles: A Journal of Research, 30, 177-189.

Bjorkqvist, K. (1997). The inevitability of conflict but not of violence: Theoretical considerations on conflict and aggression. In D. P. Fry & K. Bjorkqvist (Eds.), Cultural variation in conflict resolution: Alternatives of violence (pp. 25-39). Mahwah, NJ: Erlbaum.

Bjorkqvist, K., Lagerspetz, K., & Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. Aggressive Behavior, 18, 117-127.

Bjorkqvist, K. & Niemela, P. (1992). New trends in the study of female aggression. In K. Bjorkqvist & P. Niemela (Eds.), Of mice and men: Aspects of female aggression (pp. 126-199). San Diego: Harcourt Brace.

Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. In K. Bjorkqvist & P. Niemela (Eds.) Of mice and women: Aspects of female aggression (pp. 51-64).

Brannon, L. (1996). Gender: Psychological perspectives. New York: Harcourt Brace.

Bronfenbrenner, U. & Ricciuti, H.N. (1960). The appraisal of personality characteristics in children. In P.H. Mussen (Ed.), Handbook of research methods in child development (pp. 770-817). New York: John Wiley & Sons.

Burbank, V. (1987). Female aggression in cross-cultural perspective. Behavior Science Research, 21, 70-100.

Buss, A. H. (1961). The psychology of aggression. New York: Wiley.

Cairns, R.B., & Cairns, B.D., Neckerman, H.J., Ferguson, L.L., & Gariepy, J.L. (1989). Growth and aggression 1: Childhood to early adolescence. Developmental Psychology, 25, 320-330.

Campbell, A., Sapochnik, M., Muncer, S. (1997). Gender differences in aggression: Does social representation mediate form of aggression. British Journal of Social Psychology, 36, 161-171.

Coie, H.D., & Dodge, K.A. (1998). Aggression and antisocial behavior. In W. Damon (Series ed.) & N. Eisenburg ( Vol. Ed.), Handbook of child psychology: Vol. 3. Social, emotional, and personality development (5th ed., pp. 779-862). New York: Wiley.

Cook, H.B. (1992). Matrifocality and female aggression in Margariteno society. In K. Bjorkqvist & P. Niemela (Eds.), Of mice and men: Aspects of female aggression (pp. 149-161). San Diego: Harcourt Brace.

Crick, N.R., & Grotpeter, J.K. (1995). Relational aggression, gender, and social psychological adjustment. Child Development, 66, 710-722.

Crick, N.R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. Child Development, 67, 2317-2327.

Crick, N.R., Bigbee, M.A., & Howes, C. (1996). Gender differences in children's normative beliefs about aggression: How do I hurt thee? Let me count the ways. Child Development, 67, 1003-1014.

Crick, N.R., Casas, J.F., & Mosher, M. (1997). Relational and overt aggression in preschool. Developmental Psychology, 33, 579-588.

Crick, N.R. (1995). Relational aggression, gender, and social-psychological adjustment. Child Development,66, 710-722.

Crick, N.R., Werner, N.E., Casas, J.F., O'Brian, K.M., Nelson, D.A. Grotpeter, J.K. & Markon, K. (1999). Childhood aggression and gender: A new look at an old problem. In D. Bernstein (Ed.), The Nebraska symposium on motivation (Vol. 45). Lincoln: University of Nebraska Press.

Eagly, A.H., & Steffen, V.J. (1986). Gender and aggressive behavior: A meta-analytical review of the social psychological literature. Psychological Bulletin, 100, 309-330.

Eron, L.D., Walder, L.O., & Lefkowitz, M.M. (1971). Learning of aggression in children. Boston: Little, Brown, and Co.

Farver, J.A.M., & Wimbarti, S. (1995). Indonesian children's play with their mothers and older siblings. Child Development, 66, 1493-1503.

Feshbach, S. (1964). The function of aggression and the regulation of the aggressive drive. Psychological Review, 71, 257-272.

Fredrick, W.H. & Worden, R.L. (1993). Indonesia" A country study (5th Ed.). Library of Congress. Washington, DC: Federal Research Division, Library of Congress.

French, D.C., Jansen, E.A., Fosco, A., Rianasari, M, Pidada, S., & Nelwan, P. (1999). Friendship qualities of United States and Indonesian children and adolescents. Manuscript under review.

Fry, D.P. (1992). Female aggression among the Zapotec of Oaxaca, Mexico. In K. Bjorkqvist & P. Niemela (Eds.), Of mice and men: Aspects of female aggression (pp. 187-199). San Diego: Harcourt Brace.

Galen, BR, & Underwood, MK (1997). A developmental investigation of social aggression among children. Developmental Psychology, 33, 589-600.

Goldstein, A.P., & Segall, M.H. (1983). Aggression in a global perspective. New York: Pergamon.

Green, L.R., Richardson, D.R., & Lago, T. (1996). Aggressive Behavior, 22, 81-86.

Grotpeter, J.K., & Crick, N.R. (1996). Relational aggression, overt aggression, and friendship. Child Development, 67, 2328-2338.

Hart, C.H., Nelson, D.A., Robinson, C.C., Olsen, S.F., McNeilly-Choque, M.K. (1998). Overt and relational aggression in Russian nursery-school-age children: Parenting style and marital linkages. Developmental Psychology, 34, 687-697.

Hart, C.H., Yang, C., Nelson, D.A., Robinson, C.C., Jin, S., Win, P., Olsen, S.F., & Newell, L.D. (1999, April). Subtypes of aggression in Chinese, Russian, and U.S. preschoolers: Gender and peer status linkages. In J. Kupersmidt (Chair), Social relationships and two forms of aggression: gender considerations. Symposium conducted at the Biennial Meeting of the Society for Research in Child Development, Albuquerque, NM.

Hartup, W.W. (1974). Aggression in childhood: Developmental perspectives. American Psychologist, 29, 336-341.

Hines, N.J. & Fry, D.P. (1994). Indirect modes of aggression among women of Buenos Aires, Argentina. Gender Roles: A Journal of Research, 30, 213-237.

Hofstede, G. (1997). Cultures and organizations: Software of the mind. New York: McGraw-Hill.

Ladd, G.W. (1983). Social networks of popular, average, and rejected children in school settings. Merrill-Palmer Quarterly, 29, 283-308.

Lagersptez, K. M., & Bjorkqvist, K.(1994) Indirect aggression in boys and girls. In L.H. Huesmann (Ed.), Aggressive behavior: Current perspectives (pp. 131-150). New York: Plenun Press.

Lagerspetz, K.M., Bjorkqvist, K., & Peltonen, T. (1988). Is indirect aggression typical of females? Gender differences in aggressiveness in 11- to 12-year-old children. Aggressive Behavior, 14, 403-414.

Lindeman, M., Harakka, T., & Keltikangas- Jarvinen. (1997). Age and gender differences in adolescents' reactions to conflict situations: aggression, prosociality, and withdrawal. Journal of Youth and Adolescence, 26. p. 339-352.

Loeber, R. (1982). The stability of antisocial behavior: A review. Child Development, 53, 1431-1446.

Maccoby, E.E., & Jacklin, C.N. (1974). The psychology of gender differences. Stanford, CA: Standford University Press.

Maccoby, E.E., & Jacklin, C.N. (1980). Sex differences in aggression: A rejoinder and reprise. Child Development, 51, 961-980.

Magnis-Suseno, F. (1997) Javanese ethics and world-view: The Javanese idea of the good life. Jakarta: Penerbit PT Gramedia Pustaka utama

McGrew, W. C., (1972). An ethological study of children's behavior. New York: Academic Press.

McNeilly-Choque, M.K., Hart, C.H., Robinson, C.C., Nelson, L.J., & Olsen, S.F. (1996). Overt and relational aggression on the playground: Correspondence among different informants. Journal of Research in Childhood Education, 11 47-67.

Mulder, N. (1992). Individual and society in Java: A cultural analysis. Yogyakarta: Gadjah Mada University Press.

Mulder, N. (1996). Inside Indonesian society: Change in Java. Amsterdam: Pepin.

Olweus, D. (1978) Aggression in the schools: Bullies and whipping boys. Washington DC: Hemisphere.

Osterman, K, Bjorkqvist, K., Lagerspetz, K., Kaukiainen, K., Huesmann, L., & Fraczek, A. (1994). Peer and self-estimated aggression and victimization in 8-year-old children from five ethnic groups. Aggressive Behavior, 20, 411-428.

Osterman, K., Bjorkqvist, K., Lagerspetz, K.M.J., Kaukiainen, K., Landau, S.F., Fraczek, A., & Caprara, G.V. (1998). Cross-cultural evidence of female indirect aggression. Aggressive Behavior, 24, 1-8.

Owens, L.D., & MacMullin, C.E. (1995). Gender differences in aggression in children and adolescents in south Australian schools. International Journal of Adolescence and Youth, 6, p. 21-35.

Parke, R.D., & Salby, R.G. (1983). The development of aggression. In P.H. Mussen (Series Ed.) and M. Hetherington (Vol. Ed.), Handbook of child psychology ($4^{th}$ ed., Vol. 4, pp. 548-641).

Peacock, J.L. (1973). Indonesia: An anthropological perspective. Pacific Palisades, CA: Goodyear Publishing.

Pedhazur, E. J. (1997). Multiple regression in behavioral research: Explanation and prediction. Fort Worth, TX: Harcourt Brace.

Richardson, D.R., & Green, L.R. (1997). Circuitous harm: Determinants and consequences of nondirect aggression. In R.M. Kowalski (Ed.), Aversive interpersonal behavior (pp. 171-188). New York: Plenum Press.

Rosenthal, D.A., & Feldman, S.S. (1996). Crossing the border: Chinese adolescents in the West. In S. Lau (Ed.), Growing up the Chinese way (pp. 288-320). Hong Kong: Chinese University Press.

Schaffer, R.H. (1996). Social development. Cambridge, MA: Oxford.

Segall, M.H., Dasen, P.R., Berry, J.W., & Poortinga, Y.H. (1990). Human behavior in global perspective: An introduction to cross-cultural psychology. New York: Pergamon.

Shaffer, D.R., (1994). Social and personality development. New York: Brooks/Cole.

Tomada, G. & Schneider, B.H. (1997). Relational aggression, gender, and peer acceptance: Invariance across culture, stability over time, and concordance among informants. Developmental Psychology, 33, 601-609.

Triandis, H.C. (1994). Culture and social behavior. New York: McGraw-Hill.

Weisz, J.R., Chaiyasit, W., Weiss, B., Eastman, K.L., & Jackson, E.W. (1995). A multimethod study of problem behavior among Thai and American children in school: Teacher reports versus direct observation. Child Development, 66, 402-415.

Weisz, J.R., & McCarty, C.A. (1999). Can we trust parent reports in research on cultural and ethnic differences in child psychopathology? Using the bicultural family design to test parental cultural effects. Journal of Abnormal Psychology, 108, 598-605.

Weisz, J.R., Suwanlert, S., Chaiyasit, W., Weiss, B., Achenbach, T.M., & Walter, B. (1987). Epidemiology of behavioral and emotional problems among Thai and American children: Parent reports for ages 6-11. Journal of the American Academy of Child and Adolescent Psychiatry, 26, 890-897.

Whiting, B.B., & Whiting, J.W.M. (1975). Children of six cultures: A psycho-cultural analysis. Cambridge, MA: Harvard University Press.

Whiting B., & Edwards, C.P. (1973). Cross-cultural analysis of sex differences in the behavior of children aged three to eleven. Journal of Social Psychology, 91, 171-188.

Whiting, B.B., & Edwards, C.P. (1988). Children of different worlds: The formation of social behavior. Cambridge, MA: Harvard University Press.

Wright, R. E. (1998). Logistic Regression. In L.G. Grimm & P.R. Yarnold (Eds.), Reading and Understanding Multivariate Statistics (pp. 217-244). Washington, DC: American Psychological Association.

Table 1

Differences Between Relational and Non-Relational Aggression

| Relational Aggression | Non-Relational Aggression |
|---|---|
| Verbal | Verbal |
| Spreading rumors or gossiping about a peer (covert) | Insulting a peer |
| "He always tells lies about me to other kids" | "You are dumb, and you are a jerk." |
| Threatening to stop being a peer's friend anymore (overt) | Threatening to physically harm a peer |
| "She told me that if I didn't help her with her homework, she wouldn't be my friend anymore." | "I'm going to beat you up." |
| Non-Verbal | Physical |
| Trying to exclude a peer from peer group activities | Kicking a peer |
| "She always leads her group away from me if I come over and try to play kickball with them." | "He comes over and just kicks me all the time." |
| Ignoring a peer | Punching a peer |
| "When I say hi to him he just walks away from me." | "He punches other kids and pinches a lot." |

Table 2

Studies of Gender and Developmental Differences in Indirect Aggression

| Study | Age | N | Country | Methods | Gender and Developmental Effects |
|---|---|---|---|---|---|
| Feshbach, 1969 | 1st grade | 126 | U.S. | observations | 1st minute of observation G>B Indirect<br>Later in session G=B Indirect |
| Lagerspetz, Bjorkqvist & Peltonean, 1988 | 11-12 yr. olds | 167 | Finland | questionnaires (peer nomination & self-report) & some structured interviews | G>B Indirect<br>B>G Direct Physical<br>.B=G Direct Verbal |
| Cairnes et al., 1989 | 4th-9th grade | | U.S. | interviews (structured) questionnaires (peer, teacher & self-report) | G>B Social Alienation & Manipulation<br>For girls, 7th-9th > 4th-6th Social Alienation & Manipulation, 7th-9th < 4th-6th Physical |

Table 2 cont.

| Study | Age | N | Country | Methods | Gender and Developmental Effects |
|---|---|---|---|---|---|
| Bjorkqvist, Lagersptez & Kaukainen, 1992 | 8 & 15 yr.-olds | 212 | Finland | questionnaires (peer nomination & self report) & some interviews | G=B Indirect (8 yr.)<br>B>G Physical & Direct Verbal (8 yr.)<br>G>B Indirect (15 yr.)<br>B>G Physical (15 yr.)<br>G=B Direct Verbal (15 yr.) |
| Lagerspetz & Bjorkqvist, 1994 | 18 yrs. | 205 | Finland | questionnaires (peer and self-report) | G>B Indirect<br>G=B Direct Physical<br>G>B Direct Verbal |
| Osterman, Bjorkqvist, Lagerspetz, & Kaukiainen, 1994 | 8 yr. olds | 404 | Finland, Poland, U.S. | interview (structured) | G=B Indirect<br>B>G Physical |

Table 2 cont.

| Study | Age | N | Country | Methods | Gender and Developmental Effects |
|---|---|---|---|---|---|
| Crick & Grotpeter, 1995 | 3rd-6th graders | 491 | U.S. | questionnaires (peer nominations) | G>B Relational<br>B>G Overt |
| Owens & MacMullin, 1995 | 7-16 yr. olds | 422 | Australia | questionnaires | G=B Indirect (2nd –6th)<br>G>B Indirect (9th-11th)<br>B>G Verbal (2nd – 11th) |
| Crick, Bigbee & Howes, 1996 | 9-12 yr. olds | 459 | U.S. | interviews (open-ended) | G>B Relational<br>B>G Physical<br>For girls, more 5th and 6th graders cited relational aggression as a normative behavior than 3rd and 4th graders. |
| Green, Richardson, & Lago, 1996 | 21 yr. olds | 148 | U.S. | questionnaires (self-report) | G=B Indirect<br>B>G Direct |

Table 2 cont.

| Study | Age | N | Country | Methods | Gender and Developmental Effects |
|---|---|---|---|---|---|
| Campbell, Sapochnick, & Muncer, 1997 | 18-25 yrs. | 105 | U.K. | questionnaires (self-report) | G>B Indirect |
| Table 2 cont. | | | | | |
| Crick, 1997 | 3rd-6th graders | 1,166 | U.S. | questionnaires (peer-nomination) | G>B Indirect<br>B>G Overt |
| Crick, Casas, & Mosher, 1997 | 3-4 yr. olds | 65 | U.S. | questionnaires (teacher & peer (reports) | G=B Relational (peer report)<br>G=B Overt (peer report)<br>G>B Relational (teacher report)<br>B>G Overt (teacher report) |
| Galen & Underwood, 1997 | 4th-10th graders | 234 | U.S. | questionnaires | G=B Social (4th-7th)<br>G=B Physical (4th-7th)<br>G>B Social (10th) |

Table 2 cont.

| Study | Age | N | Country | Methods | Gender and Developmental Effects |
|---|---|---|---|---|---|
| Lindeman, Harakka, & Keltikangas-Jarvinen 1997 | 11, 14, 17 yrs. | 2940 | Finland | questionnaires | B>G Indirect<br>B>G Direct<br>Age 14 >ages 11 or 17 Indirect (B&G) |
| Tomada & Schneider, 1997 . | 8-10 yrs. | 314 | Italy | questionnaires (teacher & peer reports) | B>G Relational (peer report)<br>B>G Overt (peer report)<br>B=G Relational (teacher report)<br>B=G Overt (teacher report) |
| Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998 | 3-6 yrs. | 207 | Russia | questionnaire (teacher report) | B=G Overt<br>B=G Relational |

Table 2 cont.

Studies of Gender Differences in Indirect Aggression

| Study | Age | N | Country | Methods | Gender and Developmental Effects |
|---|---|---|---|---|---|
| Osterman et al., 1998 | 8, 11, 15 yrs. | 2, 094 | Finland, Italy, Poland, & Israel | questionnaire (peer-report) | G>B Indirect<br>B>G Direct |
| Hart et al. 1999 | 4-6 yr. Olds | | China<br>Russian<br>U.S. | questionnaires (teacher-report) | G>B Relational (Significant in U.S. only)<br>B>G Physical |

Table 3

Percentage Agreement and Kappa Coefficients for Coding by Two Raters

| Code | % agreement | Kappa (κ) |
|---|---|---|
| Physical and Verbal Aggression | | |
| Physical aggression | .996 | .973 |
| Verbal aggression | .997 | .975 |
| Relational Aggression | | |
| Malicious rumors | .998 | .985 |
| Relationship manipulation | .999 | .991 |
| Social ostracism | .997 | .959 |

Table 4

Frequency and Percentage of Five Codes

| | Females | | | | | | Males | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5th grade | | 8th grade | | Combined | | 5th grade | | 8th grade | | Combined | | Results |
| | f | % | f | % | f | % | f | % | f | % | f | % | |
| Physical Aggression | | | | | | | | | | | | | M>F, 5th>8th, Ind>US |
| Indonesia | 12 | 19.4 | 5 | 8.3 | 17 | 13.9 | 48 | 82.8 | 37 | 61.6 | 85 | 72.0 | |
| U.S. | 6 | 12.5 | 6 | 11.8 | 12 | 12.1 | 26 | 53.1 | 25 | 43.1 | 51 | 47.7 | |
| Verbal Aggression | | | | | | | | | | | | | |
| Indonesia | 30 | 48.4 | 35 | 58.3 | 65 | 53.3 | 27 | 46.6 | 31 | 51.7 | 58 | 49.2 | |
| U.S. | 26 | 54.2 | 23 | 45.1 | 49 | 49.5 | 30 | 61.2 | 28 | 48.3 | 58 | 54.2 | |
| Malicious Rumors | | | | | | | | | | | | | F>M, 3-way Interaction |
| Indonesia | 20 | 32.3 | 14 | 23.3 | 34 | 27.9 | 3 | 5.17 | 9 | 15.0 | 12 | 10.2 | |
| U.S. | 5 | 10.4 | 21 | 41.2 | 26 | 26.3 | 6 | 12.2 | 6 | 10.3 | 12 | 11.2 | |

Table 4 cont.

| | Females | | | | | | Males | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5th grade | | 8th grade | | Combined | | 5th grade | | 8th grade | | Combined | | Results |
| | f | % | f | % | f | % | f | % | f | % | f | % | |
| Relationship Manipulation | | | | | | | | | | | | | F>M |
| Indonesia | 13 | 21.0 | 14 | 23.3 | 27 | 22.1 | 3 | 5.2 | 5 | 8.3 | 8 | 6.8 | |
| U.S. | 8 | 16.7 | 8 | 15.7 | 16 | 16.2 | 3 | 6.1 | 0 | 0 | 3 | 2.8 | |
| Social Ostracism | | | | | | | | | | | | | F>M |
| Indonesia | 16 | 25.8 | 18 | 30.0 | 34 | 27.9 | 6 | 10.3 | 3 | 5.0 | 9 | 7.6 | |
| U.S. | 17 | 35.4 | 17 | 33.3 | 34 | 34.3 | 3 | 6.1 | 0 | 0 | 3 | 2.8 | |

Notes: Indonesian sample: Fifth grade males N=30, Fifth grade females N=30, Eighth grade males N=30, Eighth grade females N=30.
U.S. Sample: Fifth grade males N=25, Fifth grade females N=25, Eight grade males N=29, Eighth grade females N=26.

Table 5

Logistic Regression for Physical Aggression

| Variables | B | S.E. | z | Odds Ratio |
|---|---|---|---|---|
| Country | 0.762 | .236 | 3.040** | 2.142 |
| Grade | 0.660 | .234 | 2.823* | 1.936 |
| Gender | -2.47 | .254 | -9.718** | 0.085 |

Note. *p<.01, **p<.001; Block 1 $\Delta X^2$ (3)=133.189, p=.000; Block 2 $\Delta X^2$ (4)=5.870, p=.209.The interaction effects were not reported because the contribution of the interactions was not significant.

Table 6

Logistic Regression for Verbal Aggression

| Variables | B | S.E. | z | Odds Ratio |
|---|---|---|---|---|
| Country | -.029 | .023 | - .152 | 0.972 |
| Grade | .040 | .190 | .038 | 1.041 |
| Gender | .001 | .190 | .005 | 1.000 |

Note. *p<.01, **p<.001; Block 1 $\Delta X^2$ (3)= .066, p=.996; Block 2 $\Delta X^2$ =4.960, p=.291; The interaction effects were not reported because the contribution of the interactions was not significant.

Table 7

Logistic Regression for Relationship Manipulation

| Variables | B | S.E. | z | Odds Ratio |
|---|---|---|---|---|
| Country | 0.504 | .310 | 1.626 | 1.657 |
| Grade | 0.020 | .299 | 0.067 | 1.020 |
| Gender | 1.542 | .354 | 4.361** | 4.675 |

Note: *p<.01, **p<.001; Block 1 $\Delta X^2$ (3)=26.291, p=.000; Block 2 $\Delta X^2$ (4)=5.861, p=.210.The interaction effects were not reported because the contribution of the interactions was not significant.

Table 8

Logistic Regression for Social Ostracism

| Variables | B | S.E. | z | Odds Ratio |
|---|---|---|---|---|
| Country | -0.062 | .263 | -0.235 | 0.940 |
| Grade | 0.169 | .262 | 0.646 | 1.184 |
| Gender | 2.064 | .331 | 6.242** | 7.880 |

Note: *p<.01, **p<.001;Block 1 $\Delta X^2$ (3)= 53.580, p=.000; Block 2 $\Delta X^2$ =9.63, p=.047.
The interaction effects were not reported because the contribution of the interactions was not significant.

Table 9

Logistic Regression for Malicious Rumors

| Variables | B | S.E. | z | Odds Ratio | $\Delta X^2$ |
|---|---|---|---|---|---|
| Block 1 | | | | | 23.622** |
| Country | 0.030 | .250 | 0.121 | 1.031 | |
| Grade | -0.453 | .252 | -1.799 | 0.636 | |
| Gender | 1.15 | .265 | 4.361** | 3.176 | |
| Block 2 | | | | | 14.235* |
| Country | 0.425 | .563 | 0.755 | 1.529 | |
| Grade | 0.190 | .613 | 0.310 | 1.209 | |
| Gender | 1.800 | .517 | 3.490** | 6.067 | |
| CountryXGrade | -1.363 | .926 | -1.472 | - | |
| GenderXGrade | -1.985 | .825 | -2.407 | - | |
| CountryXGender | -1.258 | .701 | -1.795 | - | |
| CountryXGenderX Grade | 3.606 | 1.153 | 3.172* | - | |

Note.*p<.01, **p<.001; Block 1 $\Delta X^2$ (3)=23.622, p=.000; Block 2 $\Delta X^2$ (4) = 14.235, p=.007.

Table 10

Frequencies and Percentages of Malicious Rumors Codes by Country

| | Males | | Females | |
|---|---|---|---|---|
| | f | % | f | % |
| United States | | | | |
| Fifth grade | 6 | 12.2 | 5 | 10.4 |
| Eighth grade | 6 | 10.3 | 21 | 41.2 |
| Indonesia | | | | |
| Fifth grade | 3 | 5.2 | 20 | 32.3 |
| Eighth grade | 9 | 15.0 | 14 | 23.3 |

# Appendix

## Aggression Subtypes Coding Manuel

### Physical Aggression

Physical Aggression [P]. This category includes behaviors that cause harm or intend to cause harm to another's physical well-being. A few of the many behaviors that are part of this category include: hitting, kicking, slapping, tripping, shoving, pushing,, and pulling.

### Verbal Aggression

Verbal Aggression [VA]. This category includes behaviors that put down or denigrate a person. These behaviors do not focus on damage to relationships. Behaviors in this category include: putting people down, teasing, insulting, and yelling. This category also includes behaviors that verbally threaten other's physical well being. Behaviors in this category include: threatening to beat someone up, and saying that he/she will start a fight with the other person.

### Relational Aggression

Relationship Manipulation [M]. This category refers to acts which try to directly manipulate the dyadic friendship between the aggressor and the peer. It does not include exclusion from cliques (coded as SO). Behaviors include: threatening to stop being someone's friend in order to hurt them or get what he/she wants, becoming friends with someone else to get back at a peer, ignoring or refusing to talk to a peer.

Social Ostracism [SO]. This category refers to not letting someone into one's friendship group. Behaviors include: excluding someone from a peer group or clique, shutting certain peers out of group activities, refusing to let someone participate in an activity, trying to get others to stop liking or playing with a certain person, or saying to others, "Let's not be friends with him or her."

Malicious Rumors [MR]. This category refers to trying to hurt another person's relationships by spreading false information about that person behind their back. Behaviors in this category include: spreading rumors, gossiping (saying bad things behind the others back), writing nasty notes about the person, or telling false stories or lies about the person.