GUILT AND SHAME IN CHILDREN:

RELATIONSHIPS WITH EMPATHY AND AGGRESSION

by

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Guilt and Shame in Children: Relationships with Empathy and Aggression

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ABSTRACT

A limited amount of previous research has shown that children's experiences of self-conscious emotions, such as guilt and shame show differential relationships to their abilities to empathically respond to other people's emotional states and to their aggressive behavior. In the present study, it was predicted that guilt would have a curvilinear relationship with empathy and aggression, with children scoring in the moderate range on a measure of guilt showing the highest empathy scores and the lowest aggression scores. Shame was expected to show an inverse, linear relationship to empathy and a positive, linear relationship to aggression. One-hundred and fifteen children between eight and twelve years of age participated in the present study. Children completed the Test of Self-Conscious Affect - Children's version, and the Empathy Continuum measure. Parents completed the Child Behavior Checklist - Parents version, and a demographic questionnaire. Present results were found to be conditional upon children's age and sex, rather than generalizable across children. Guilt showed a negative relationship to empathy in the younger boys, whereas all other age groups showed a positive relationship between guilt and empathy. Shame showed a negative relationship with empathy in the younger girls, a positive relationship with empathy in the younger boys and older girls, and no relationship to empathy in the older boys. Guilt and shame showed negative relationships with aggression in younger boys and older girls, positive relationships with aggression in older boys, and no relationships with aggression in younger girls. Results are discussed in terms of theoretical and methodological implications for developmental research in this area. Limitations of the present study are discussed, as are suggestions for future research.

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Introduction

The self-evaluative emotions of guilt and shame have intrigued many for centuries and have been viewed from philosophical, political, moral, religious and psychological perspectives. Recent psychological formulations of these emotions have stimulated a flurry of research attempting to differentiate between them, to identify the differential proneness of some people to one versus the other of these emotions, and to suggest different behavioral outcomes resulting from such individual differences.

It has been postulated that people vary in their susceptibility to the self-conscious emotions of guilt and shame (Tangney, 1991, 1995; Tangney, Burggraf, & Wagner, 1995). According to this view, although people experience both emotions, some people are more prone to feel shame in response to interpersonal conflict or distress whereas others are more likely to feel guilt. Children's differential experience to varying levels of either shame or guilt and its proposed relationship to both empathy and aggression will be the focus of this study. A more general consideration of the major concepts involved in the research is provided next.

Differentiation of Guilt and Shame

Guilt and shame have often been identified as one and the same affective experience, or so closely related as to render differentiation redundant. However, distinctions between these negatively self-evaluative emotions should prove relevant to both developmental and clinical considerations of children's personality and behavioral development. A fundamental distinction between guilt and shame is in terms of their focus of evaluation. As noted most centrally in the theoretical writings of Helen Block Lewis

(1971) and the empirical work of June Price Tangney (1991, 1995; Tangney, Wagner, Fletcher, & Gramzow, 1992a; Tangney, Wagner, & Gramzow, 1992b; Tangney, Burggraf, & Wagner, 1995), in guilt, the evaluative focus is on the act committed; in shame, the focus encompasses the entire self. In other terms, this can be conceptualized as the distinction between being a bad child and doing a bad thing.

Overt behavioral indices of guilt and shame are difficult to differentiate, as neither emotion has a clear and distinct set of expressive or behavioral features. Several facial expressions and gestural changes have been used by Izard (1977) to identify shame even in infants: the gaze is averted, the face is turned away, and body movements, such as lowering the head, and curling up the shoulders, seem to make the person appear smaller. According to Izard, facial blushing may also indicate shame. In contrast, distinctive features of guilt are much more difficult to identify by facial and gestural codes. Izard globally characterizes the guilt face as "heavy" and, similar to shame, the person typically averts his gaze and avoids eye-contact with others.

Differentiation of the prototypic situational determinants of either shame or guilt also presents difficulties. Despite the overlap in situations inducing either shame or guilt across individuals, some general distinctions appear from research reports with adults. Situations reported as more likely to induce guilt included violating moral sanctions or rules such as lying, stealing, cheating, infidelity, and breaking a diet. In contrast, shame was more closely associated with experiences of personal failure, embarrassment, socially inappropriate dress or behavior, and sex (Tangney, 1992). In general, although both guilt and shame were associated with a concern regarding one's effect upon other people, shame was exclusively associated with a concern of other's evaluations of the self

(Tangney, 1992).

Children and adolescents appear to make similar distinctions as do adults in the situational determinants of guilt and shame. Children, when asked about their understanding of the situational determinants of guilt and shame, associated guilt feelings with moral norm violations such as property damage or personal injury (Ferguson, Stegge, & Damhuis, 1991). These concerns decreased with age (Williams & Bybee, 1994). Guilt over inaction, neglecting responsibilities, and in failing to attain ideals increased with age, as did concern over substance abuse, truancy, stealing, and victimization of animals (Williams & Bybee, 1994). Shame was also associated with such incidents as property damage or personal injury, but was exclusively associated with social blunders such as clumsiness or changes in physical appearance (Ferguson, Stegge, & Damhuis, 1991).

A number of authors, (e.g., Lindsay-Hartz, 1984; Wicker, Payne, & Morgan, 1983) have attempted to differentiate between guilt and shame on the basis of reported phenomenological experience. Results derived from descriptions of adults' personal guilt and shame experiences indicate that both are negative emotions and involve evaluating the self in relation to others. However, shame is reported to be more devastating and debilitating, given that it involves the whole "self". The owner of the shame experience feels small in the eyes of a real or imagined judgmental audience, and the inclinations are to run away and hide, or to strike back at the judging other with retaliatory fury. The shame experience is described as so globally focused on the self as to create momentary egocentricity: the distress of others is forgotten in the face of one's own discomfort and stress.

Guilt, however negatively construed, is evaluated in relation to one's actions, not one's being. Therefore, the capacity to reflect on the nature of another person's emotional experience remains intact. In fact, the feelings of responsibility for being the cause of another's distress and the agent of one's own guilt typically motivates the guilty person to seek reparation with the victim and avoid future transgressions. A guilty person seeks out the victim to set things right whereas a shamed person runs and hides or strikes back (Lindsay-Hartz, 1984; Wicker et al., 1983). Children's reports replicated adults' phenomenological distinctions between guilt and shame. In children's reports, shame was linked to fear of ridicule, blushing, and embarrassment. They associated guilt with feelings of regret, the desire to make reparation, and anger at the self (Ferguson, et al., 1991).

Developmental Origins of Guilt and Shame

A survey of theoretical distinctions between guilt and shame, focusing more closely on the development of these emotions, begins with Sigmund Freud. Freud did not provide distinguishing information about how guilt and shame might differ for the people experiencing these emotions, but he did differentiate between them in terms of their etiology. Shame was regarded as a more basic and primitive emotion arising as a defense against sexual and aggressive impulses. Guilt arose later as a result of the formation of the superego and the resolution of the Oedipus complex. In Freudian theory, guilt was the more important emotion in terms of its impact on subsequent development and psychological health (Freud, 1913/1989, 1914/1989, 1917/1989, 1923/1989, 1925/1989).

Erik Erikson (1963) distinguished between these two emotions in his psychosocial theory of ego development. According to Erikson, strivings for autonomy and against its

shameful excesses must be balanced; this struggle appears first in toddlerhood. The resolution of this crisis results in the emergence of the child's appropriate strength of will. For Erikson, as well as Freud, shame is experienced at an earlier age than guilt. It is elicited when, in attempting to control and limit the child's urges to explore the environment and act autonomously, parents instill in their child doubts about his or her own competencies and self-worth. According to Erikson, the resolution of the subsequent psychosocial crisis balancing guilt and initiative affects the child's motivational strength of purpose. An appropriate amount of guilt is necessary for the internalization of parental and societal values. For Erikson, even more than for Freud, some guilt and shame are necessary for appropriately balanced personality development. Too much of either, however, may result in excessive shame and an insufficient self-reliance or excessive guilt and an insufficient ability to initiate action (Erikson, 1963).

More recent developmental researchers who address the emergence and development of shame in children generally agree that it emerges only after children have the cognitive capacity to understand themselves as objects for reflection and have the social maturity to understand and implement social scripts and the rules of conduct (Emde, Johnson, & Easterbrooks, 1987; Lewis, Sullivan, Stanger, & Weiss, 1989; Stipek, 1983). Other cognitively-oriented developmentalists emphasize the imaginative function in accounting for these emotions (Harris, 1989). They propose that children's abilities to imagine themselves as objects for contemplation, as well as their ability to imagine the emotional states of others is necessary for the development of guilt and shame.

Guilt and Shame-proneness

Not only are guilt and shame emerging more clearly as different types of emotions, they are also being used to define different types of people. On the basis of an accumulating number of empirical studies (Tangney, 1991, 1995; Tangney et al., 1992a; Tangney et al., 1992b; Tangney et al., 1995), Tangney has identified what she believes to be characteristic, trait-like personality patterns of guilt and shame. In this view, although people have the capacity to experience both emotions in their full range and intensity, some individuals are characteristically more prone to experience shame whereas others are more prone to feel guilt.

Individual differences in this characteristic proneness for experiencing one emotion over the other have implications for behavioral motivations and psychological adjustment (Tangney, 1991, 1995; Tangney et al., 1992a; Tangney et al., 1992b; Tangney et al., 1995). The impact of proneness to shame on psychological adjustment seems to be more negative than proneness to guilt. According to Tangney, her findings indicate that adults who are shame-prone show less other-oriented empathy, are more likely to externalize blame, and to engage in actions which impede constructive reparation for misdeeds. Proneness to shame has also been linked to an increased likelihood of depression, and lower self-esteem. In contrast, guilt, or more specifically, shame-free guilt (guilt, with the influence of shame partialled out), has been linked with greater empathy, and higher self-esteem. Guilt, as opposed to shame, does not appear to be related to adults' indices of psychological maladjustment (Tangney, 1991, 1995; Tangney et al., 1992a; Tangney et al., 1992b; Tangney et al., 1995). For others, both guilt and shame are related to maladjustment (e.g., Harder, 1995).

Although such research is less extensive, Tangney and her colleagues have also investigated guilt and shame in children. It appears that children's guilt scores are positively related to affective empathy whereas their shame scores are unrelated to their levels of empathic responsiveness (Tangney, Burggraf, Wagner, Gramzow, & Fletcher, 1991).

Tangney posits that shame-proneness has negative implications for psychological functioning, whereas guilt-proneness seems to promote positive interpersonal variables such as empathy (Tangney, 1995). From her perspective, shame has only maladaptive ramifications; the only adaptive self-conscious emotion would seem to be guilt. Others formulate more comprehensive views of the functional roles guilt and shame are said to have in people's emotional lives. Barrett (1995) describes the adaptive, regulatory functions of both guilt and shame. Guilt serves to facilitate the meeting of known standards, by signaling when a person has not done so. Shame is an emotion which serves to facilitate the maintenance of others' respect and/or affection, and to preserve positive self regard, by motivating change (Barrett, 1995). Thus, both guilt and shame have adaptive purposes in emotional regulation.

Harder (1995) disagrees with Tangney's characterization that only shame, and not guilt, is related to psychopathology. Through extensive construct validity studies on measures of guilt and shame, his results suggest that both guilt and shame are implicated equally in the presence of psychopathology. Guilt appears more closely related than shame to anger or hostility. Shame appears to be more closely related than guilt to depression and obsessive-compulsiveness (Harder, 1995). In this way, one can see that not only does shame have adaptive functions in emotion, but that guilt has a part to play in

maladaptive functioning.

The Present Study

The present study will expand upon the previous research conducted regarding children's guilt and shame. In particular, children's guilt and shame will be compared to their empathic responsiveness and their aggression. This research seems particularly important because children's guilt and shame are topics which have received relatively little empirical attention. The importance of the self-conscious emotions have been emphasized in the socialization literature (i.e., Kochanska, 1991). Increasingly, research has focused on the emotions of guilt and shame as important in the occurrence of psychopathology (Lewis, 1971; Harder, 1995; Tangney, 1995). The negative impact of guilt and shame is hypothesized to originate in childhood (i.e., Barrett, Zahn-Waxler, & Cole, 1993). As well, the particular implications of shame for maladaptive social and psychological functioning seem to call for its greater understanding in the context of childhood development.

In the present study, children's self-reported guilt and shame were assessed and their relationships to children's levels of aggression, and their empathic responsiveness were investigated. Age-related and gender-related differences in children's guilt and shame were also examined.

Hypothesis 1: Guilt and its Relation to Empathy

In the experience of guilt, it is predicted that the greater intensity of guilt will highlight important individual differences in empathy. It is hypothesized that guilt and empathy will be curvilinearly related. Specifically, it is expected that children's moderate

guilt scores on the TOSCA-C questionnaire will relate most highly with their empathy scores on the Empathy Continuum measure. In contrast, high and low guilt scores are expected to relate less well to empathy scores.

Some researchers postulate that an understanding of, and an empathic sharing of another's emotional state, particularly a negative emotional state, is integral to the development of guilt and moral internalization (Hoffman, 1979, 1982; Zahn-Waxler & Robinson, 1995). Regardless of the theoretical causal direction of the relationship, the present study seeks to establish whether such a relationship is, in fact, present.

Children reporting moderate scores of guilt on the TOSCA-C are expected to show the highest relationships to scores on the Empathy Continuum. Guilt is hypothesized to focus on one's acts and not on more global evaluations of one's "self". Once able to experience guilt, the focus on the act inherent in a guilt experience allows the actor to distance him- or herself from the situation and to reflect upon the distress of others. Although guilt does engender personal discomfort, it does not typically overwhelm the actor's abilities to reason about the other person's emotional distress. Another aspect of the guilt experience is that the focus on the act allows people to act in a prosocial manner in order to alleviate their own discomfort as well as that of the victim. Focusing on the distress of other people, an awareness hypothesized to be particular to the guilt experience, appears fundamentally tied to empathic responsiveness. Furthermore, previous empirical research has shown guilt to be positively related to children's affective empathic responsiveness (Tangney et al., 1991)

Guilt is an unpleasant emotion. The curvilinearity of the guilt-empathy relationship is based on the premise that very intense guilt may be debilitating to children. Intense guilt

may tilt the emotional balance towards self-preoccupation, such that the distinction between one's own and the other person's emotional needs may not result in an other-person empathic focus. In such cases, self-preoccupation may interfere with appropriate empathic responsiveness. Thus, the children reporting high guilt scores are expected to show lower scores on the measure of empathic responsiveness, than those children reporting moderate scores on the measure of guilt.

Conversely, without the ability to empathically experience another person's emotional situation, one would be less able to conceptualize the impact that his or her actions have upon others. The empathic experience of another person's distress in response to one's own actions, may motivate the uncomfortable phenomenological experience of guilt. Thus, children who transgress against others may not experience the negative emotional ramifications of guilt if they do not have the capacity to respond empathically to another person's distress (Hoffman, 1979). Based on this formulation, it is predicted that children reporting low guilt scores will also show similarly low scores on the EC Continuum, as compared to those children reporting moderate scores for the Guilt scale on the TOSCA-C.

In the present study, children are not engaged in actual situations provoking either personal shame or guilt. It is expected, however, that children's previous history of encounters resulting in characteristic levels of either shame or guilt should relate to their differential empathic responsiveness to people witnessed in emotional contexts. Therefore, even when children's empathy is measured in a context that does not directly involve them in interpersonal interactions evoking shame or guilt, it is expected that children's internalization of varying levels of either shame or guilt will relate to their

empathy scores, measured independently.

Hypothesis 2: Guilt and its Relation to Aggression

The second hypothesis of this study concerns the theoretical relationship between guilt and aggression, as reported by children's parents. It is predicted that guilt will show a similar, curvilinear relationship with aggression as it does with empathy. Children showing moderate scores for guilt are expected to show lower scores on a measure of aggressive behavior, whereas children showing low or high scores for guilt are predicted to display higher scores on a measure of aggressive behavior.

Guilt, when experienced to a moderate degree, should show a negative relationship with the incidence of aggressive behavior. When experiencing moderate guilt, one retains the ability to reason effectively about the origins of another's distress, and the ability to plan and execute reparative actions which alleviate personal discomfort and distress in others. An appropriate sense of guilt also serves to remind the actor of the impact of aggressive acts on other people. In this way, guilt can act in a self-regulatory fashion, opposing the motivation to aggress against others. Finally, the propensity of guilty people to atone and to engage in reparative strategies may alleviate the negative emotional implications of guilt. This may circumvent the need to engage in aggressive reactions to assuage self-distress.

Children reporting low or high scores on the measure of guilt are expected to show a higher incidence of aggression than those who experience guilt to a moderate degree. Low guilt scores may indicate a failure of this emotion to function as a means to limit or control aggression. Conversely, high guilt scores may be indicative of an emotional

experience that has negative effects on the incidence of aggression. Intense guilt may override the prosocial, other-oriented functions of moderate guilt described above.

Hypothesis 3: Shame and its Relation to Empathy

This hypothesis is based on the theoretical view that shame is a self-focused emotion whereas empathy is an other-person-focused emotional process. A direct, inverse relationship is expected between shame and empathy. Empical research with adults has revealed consistent negative relationships between shame and empathy (Tangney, 1995). Results with children have been more equivocal; children's shame appears unrelated to their empathic responsiveness (Tangney et al., 1991). For shamed individuals, the tendency is to focus globally upon the self, rather than the act. This global focus of negative evaluation is thought to be debilitating and may override people's abilities to respond empathically to another person's emotional experience. Lacking insight, and compounded by feelings of inadequacy, a shamed person may feel resentful of the person in distress. Both the ability to reason about the nature of personal emotional experience, and the emotional experience of others is impaired in a shaming interpersonal encounter. Therefore, it seems reasonable to expect that shame, an emotion which interferes with empathic emotional identification, would be related to decreased empathic responsiveness.

Hypothesis 4: Shame and its Relation to Aggression

A positive relationship between scores on the measure of shame and scores on the measure of aggression is predicted. Furthermore, it is predicted that the relationship between shame scores and aggression scores will be moderated by children's sex. For shamed individuals, reactions to feelings brought about by negative evaluations of the self

typically result in avoidance of the judging audience or in retaliative acting out. Because of the global evaluative focus of shame, shamed children may ascribe their transgressions to invariant features of their personality. In a shaming encounter, aggression may serve to ameliorate feelings of shame by relieving the focus on the self and placing the onus on the judging other, the elicitor of the feelings of shame. This misplaced responsibility may be further "justified" by acting harshly towards the elicitor of shame, as if the person deserved such hostility.

This predicted positive relationship between shame and aggression is hypothesized to be moderated by children's sex. Specifically, shame scores will relate positively with aggression scores for boys. In contrast, for girls, no such relationship is predicted. This hypothesis is based on findings from a previous study of fifth-grade children which indicated that boys' shame and aggression were significantly positively related. In contrast, girls' shame was related to higher self-reported anger but not to higher levels of aggression (Tangney et al., 1991). Thus, there appears to be a difference between boys and girls in the behavioral correlates of shame.

In contrast to the gender differences predicted in the relationship of shame and aggression, no gender differences are expected for the relationship of guilt and aggression. This is because no previous gender differences in the relationship of guilt and aggression using the present measure of guilt and shame have been previously noted.

Hypothesis 5: Sex Differences in Guilt and Shame Scores

It is predicted that girls will report higher scores on the measures of guilt and shame when compared to males. Findings from past research indicate that females score

higher than do males on self-report measures tapping emotionality (Brody, 1985). More specifically, females report greater overall scores on indices of guilt and shame than do males on the TOSCA (Tangney & Wagner, 1991). Therefore, it is expected that girls will report higher scores on both the guilt and shame measures when compared to boys.

Exploration of Age-Related Differences in Guilt and Shame

It is predicted that older children in the present sample (11-12 year olds) will show higher scores on the measure of guilt compared to younger children (8-9 year olds). This is expected due to age-related improvements in the cognitive abilities necessary for the experience of guilt. Conversely, because older children will presumably have greater cognitive and emotional maturity than the younger group, the older group of children should show lower scores on the measure of shame than the younger children.

Both guilt and shame entail greater cognitive demands than the more "basic" emotions such as happiness or sadness, given that they are considered to be more dependent on attribution, than on outcome (Lewis et al., 1989; Ferguson & Stegge, 1995). Of the two self-evaluative emotions, shame seems to require less well-developed cognitive abilities than does guilt. In shame, self-other differentiation is required as is the ability to recognize oneself as the object of evaluation by others. Shame also requires a rudimentary knowledge of social rules.

Guilt seems more cognitively demanding than shame. It includes self-other differentiation, the ability to make finer distinctions between one's self and one's actions as well as the ability to refer to a set of moral rules, in contrast to the social rules which mediate shame. Guilt requires the child to understand the importance of personal

responsibility, the controllability of and intention behind one's actions, and an internalized working knowledge of the rules of conduct and how these apply to one's own behavior in a self-regulatory fashion (Emde et al., 1987; Graham, Doubleday, & Guarino, 1984; Harris, 1989; Olthof, Ferguson, & Luiten, 1989; Stipek, 1983).

It is possible that methodological factors are likely to limit present findings regarding possible age differences. The measure used to assess children's guilt and shame in the present study, the Test of Self-Conscious Affect for Children (TOSCA-C), was developed for use with children between eight and twelve years of age (Tangney, Wagner, Burggraf, Gramzow, & Fletcher, 1990). This measure will be applied to its fullest age span in an effort to examine age differences. However, no age differences for this measure have been previously reported.

Age related hypotheses regarding guilt and shame are tentative based also on theories regarding the development of guilt and shame. The development of these emotions was likely to be generally consolidated by the youngest age (8 years) capable of responding to the questionnaire. The children included in the present study had reached an age where they should be able to grasp the necessary cognitive demands of both the guilt and shame experiences (Ferguson et al., 1991; Graham et al., 1984; Nunner-Winkler & Sodian, 1988; Olthof et al., 1989;). Thus, it may be that no differences will be obtained between younger and older children for the present measure of guilt and shame.

Data Analytic Procedures

To investigate the curvilinear relationships between guilt and empathy (Hypothesis 1) and guilt and aggression (Hypothesis 2), two step-wise regression analyses will be

conducted. Guilt will be entered into the equation on the first step and a guilt-squared term will be entered into the equation on the second step, with empathy and aggression as dependent variables. The guilt term will be utilized to assess guilt's ability to predict levels of empathy and aggression. The guilt-squared term will be entered next to assess the hypothesized curvilinear relationship of guilt with empathy and aggression.

To examine the predicted inverse, linear relationship of shame and empathy (Hypothesis 3), a regression procedure will also be used. Shame will be entered into a regression equation to assess its ability to predict levels of empathy, which is the dependent variable.

To assess the relationship of shame and aggression, as moderated by sex (Hypothesis 4), a moderated step-wise regression analysis will be conducted, with shame as the predictor variable, aggression as the dependent variable and children's sex as a moderating variable. Shame alone will be entered on the first step. This will be followed, in the second step, by the shame by sex product term to assess the predictive ability of the moderated relationship.

The exploration of sex differences on reported guilt and shame scores on the TOSCA-C will be conducted through the use of a series of one-way analyses of variance. Finally, relationships of age with guilt and shame scores will be examined with Pearson product moment correlation coefficients.

Method

Participants

One-hundred and seventeen children were recruited for participation in the present

study. Of these, 115 children were included in the final investigation. One child was dropped due to irregularities in the Empathy Continuum procedure, and one child discontinued her participation. The final sample consisted of 80 children for whom both child-report and parent-report data were completed, and 35 children for whom only complete child-report data was available. Therefore, analyses using child-report measures are based on a total of 115 children. Analyses using parent-report data are based on a total of 80 children.

The younger age group consisted of 48 8- and 9-year-old children. Participants included 24 boys (M = 107.1 months; SD = 6.9 months) and 24 girls (M = 107.1 months; SD = 5.6 months). The older group consisted of 63 11- and 12-year old children. Participants included 38 boys (M = 145.9 months; SD = 6.7 months) and 25 girls (M = 141.9 months; SD = 6.2). Four 10-year-old children also participated (M = 126.7 months, SD = 3.5 months), 3 girls and 1 boy.

Permission for subject recruitment and data collection was obtained from the City of Burnaby Board of Education and the Abbotsford School Board. Thirty families who responded to flyers distributed through schools and local community organizations took part in the study at Simon Fraser University. The remaining 85 children participated in the study at their schools. Children who participated in the study received personalized certificates of appreciation to thank them for their cooperation (see Appendix A).

Measures

The Child Behavior Checklist. To assess children's levels of aggression, parents completed the Child Behavior Checklist - Parent Form (CBCL-P; Achenbach, 1991).

Although only the Aggressive Behavior subscale is of concern in the present study, the full questionnaire was administered.

The CBCL-P is appropriate for use with parents whose reading skills are at the fifth grade level and beyond (Achenbach, 1991). This relatively simple and straightforward questionnaire is also suitable for use with a diverse population and can be administered in an oral interview format (Achenbach, 1991). Although the children in the present sample were not expected to show clinical elevations on the CBCL-P, this measure was selected for use because of the foundation of empirical research supporting its reliability and validity, as well as its established use with non-clinical populations in developmental research (Achenbach, 1991).

The CBCL-P is a well-validated and widely-used assessment measure. The one week test-retest reliability correlation coefficient for the Aggressive Behavior subscale of the CBCL-P was reported to be .91 ($p < .01$; Achenbach, 1991). The Aggressive Behavior subscale showed a stability correlation coefficient of .87 ($p < .01$) for a 2-year period (Achenbach, 1991). In terms of construct validity, the correlation of the Aggressive Behavior subscale of the CBCL-P and the Conduct Problem Scale of the Conners (1973) Parent Questionnaire was .86 ($p < .0001$) and with the Conduct Disorder subscale of the Quay-Peterson (1983) Revised Behavior Problem Checklist was .88 ($p < .0001$).

The CBCL-P consists of 118 items. Parents rated the frequency with which their children exhibited each behavior within the last six months as 0 (Not True, as far as you know), 1 (Somewhat or Sometimes True) or 2 (Very True or Often True). These items yield two indices of children's behavior: internalizing behavior and externalizing behavior.

There are two specific areas of externalizing behavior which are assessed: Aggressive Behavior and Delinquent Behavior. In the present study, children's total raw scores on the Aggressive Behavior subscale were used to assess their aggression rather than converting these raw scores into T-scores. The use of T-scores in research with non-clinical populations tends to minimize variability among participants due to a normalizing distribution which is truncated in the nonclinical end (Achenbach, 1991).

The distribution of CBCL-P Aggressive Behavior total scores for the present sample revealed a positively skewed distribution, with parents reporting a very low frequency of problem behaviors. In an effort to normalize this distribution, a logarithmic transformation was applied to the CBCL-P Aggressive Behavior raw scores. These transformed scores (CBC-LOG) were utilized in subsequent analyses of aggression data.

The Test of Self-Conscious Affect - Children's Version. To assess guilt and shame, children were asked to complete the children's version of the Test of Self-Conscious Affect for Children (TOSCA-C; Tangney et al., 1990). The two present age groups represent the extremes of the age range appropriately assessed by this measure (Tangney et al., 1990). This questionnaire is composed of descriptions of 15 situations, each accompanied by four or five response options. The situations described were derived from 140 8 to 12 year old children's written accounts of guilt, shame, and pride experiences. The responses were derived from a larger pool of affective, cognitive, and behavioral responses to the above situations provided by another group of children, aged 8 to 12 years. Tangney states that the TOSCA versions of her measures of self-conscious emotion represent improvements over previous versions in terms of validity given that the situations and responses options involved were generated by children themselves (Tangney

et al., 1990). Internal consistencies calculated using Cronbach's Alpha, across different samples, yielded coefficients of .77 (N = 439), .78 (N = 324), and .78 (N = 364) for the Shame scale; and .81 (N = 439), .83 (N = 324), and .79 (N = 364) of the Guilt Scale.

According to the TOSCA-C instructions, children are asked to imagine themselves in the described situation and to rate the degree to which they would likely experience each of the 5 response options for each situation. Each response is rated on a five-point likert scale ranging from 1 ("not at all likely") to 5 ("very likely"). Response options yield indices of Shame, Guilt, Externalization, Detachment/Unconcern, Alpha Pride, and Beta Pride. Although the entire questionnaire was administered, only the indices assessing guilt and shame were included in the present study. To determine the level of guilt for each child, ratings of responses which comprised the guilt scale were summed across the 15 situations to derive a total sum score for the Guilt scale. A similar procedure resulted in a total sum score for the Shame scale.

The Empathy Continuum Scoring System. The Empathy Continuum (EC) operationalizes an affective-cognitive developmental model for studying empathic responsiveness. Children are interviewed after viewing six brief vignettes presenting children and adults in moderately emotionally evocative interactions. A range of emotional contexts is presented (e.g., happiness, sadness, fear). The descriptions of the stimulus vignettes are contained in Appendix B.

Responses are scored in terms of the concordance of the respondent's reported emotional response (if any) with the emotion attributed to the stimulus character as well as their cognitive attributions for this experienced emotion (Strayer, 1993). After the children viewed each vignette, they were asked to describe the events of that vignette to

ensure that its content was clearly understood. They were asked if they felt any emotion in response to viewing the vignette. If more than one emotion was mentioned, children were asked to pick the emotion they felt most strongly, for the longest period of time, to rate its intensity (1 = a little; 2 = a lot) and to state what had made them feel that way. They were then asked to identify the stimulus person's emotion and its intensity (1 = a little; 2 = a lot). The emotions were coded as follows: happy, sad, angry, afraid, disgusted, surprised good, or surprised bad. Children's spontaneous use of other emotion terms (e.g., frustrated), were queried to assess which of the standard set it was most like. See Appendix C for a copy of the EC interview.

The Empathy Continuum scoring system (Strayer, 1993) entails the degree of shared affect between the respondent and the stimulus person and the attributions the subject gives for his or her own emotional experience. As seen in Table 1, EC scores range from 0-19. If no concordant emotion is reported for a vignette, the empathy score is 0. If concordant emotion is reported (score 2-19), the degree of affect match with the stimulus person's emotion is scored on a 3 point scale at one of seven levels of cognitive mediation. As shown in Table 1, an EC score of 7, for example, indicates the child reported an exact emotion match with the stimulus character, and attributed it to witnessing the same situational events. The different levels of cognitive mediation (1-7) shown in Table 1, are based on theories of the development of empathy and interpersonal understanding (Strayer, 1987; 1993).

Interscorer reliabilities for the Empathy Continuum average over .85 across studies

Table 1

The Empathy Continuum: Integrated Emotional-Cognitive (EC) Scoring System

			Description	
EC Score	Cognitive Level	Affect Match	Affect Match for S[a] and SP[b]	Emotional Attribution
0	0	0	No emotion for SP	No affect match
1	1	0	Accurate SP emotion	requiring attribution
2	2	1	Similar emotion for S-SP	No or irrelevant attribution:
3		2	Similar emotion, different intensity	"I didn't like it."
4		3	Same emotion, same intensity	
5	3	1	Similar emotion for S-SP	Events only: "That old house
6		2	Same emotion, different intensity	was scary."
7		3	Same emotion, same intensity	
8	4	1	As above in this column	SP-in event: "I felt scared
9		2		when he looked in the
10		3		window."
11	5	1	As above	Reference to SP's experi-
12		2		ence: "I'm like him when
13		3		it's dark."
14	6	1	As above	Reference to SP's internal
15		2		state: "I felt sad because
16		3		she felt so put down."
17	7	1	As above	Explicit role taking: "I'd
18		2		be sad, too, in her place
19		3		with nowhere to go."

[a]S refers to subject-participant
[b]S-P refers to stimulus person in the vignette

(Strayer, 1993). Interscorer reliability for the present study was .82 across two judges. Scorers coded responses from EC vignettes for a randomly drawn sample comprising 25% of the total sample.

Responses on the Empathy Continuum are not affected by social desirability response sets (Strayer, 1993; Chisholm & Strayer, 1995; Cohen & Strayer, in press). Concurrent validity of the EC has been demonstrated in terms of significant relationships with a standardized child questionnaire measure of empathic responsiveness (Strayer, 1993; Cohen & Strayer, in press), as well as significant concordance of EC scores and facial expressions (Chisholm & Strayer, 1995; Roberts & Strayer, in press). The predictive validity of the EC has been demonstrated with positive relationships of EC scores with prosocial behavior (Poole, 1993; Roberts & Strayer, in press; Strayer & Roberts, 1989), and its negative relationship with antisocial behavior (Cohen & Strayer, in press). Previous data also indicate expected age progressions, as well as individual variability within age groups in empathic responsiveness at each age (Strayer, 1993).

Based on previous research, EC scores were expected to vary across stimulus vignettes (Strayer, 1987; 1993). For purposes of the present investigation, the within subject variability in empathic responses may obscure more general relationships among variables. In order to maximize consistency, a principal components analysis was conducted on EC scores for the six stimulus vignettes. Two principal components resulted with eigenvalues greater than one. All six vignettes loaded highly and positively on the first principal component (ranging from .42 to .70) which accounted for 35.6 percent of the variance (Eigenvalue = 2.14). Raw scores for vignettes were then

transformed into one total component score. This total component score (EC-PCA) was used in all subsequent analyses involving empathy.

Procedure

Children participated in the study in laboratory and school settings. Thirty children, accompanied by their parents, took part in the study at Simon Fraser University. When they arrived, the family was escorted into the main lab room, at which time the procedure was reviewed for both the child and parent. Parents were invited to view the Empathy Continuum vignettes before the procedure involving their children. Children were assured that they were participating in the study only because they wanted to and not because they had to do so, and that they could drop out at any point during the procedure. Informed consent from parents and assent from children were then obtained (see Appendix D for a copy of the consent form).

After this introduction was complete, the child was escorted to another, smaller room and seated in a comfortable chair, facing a television set, which displayed the Empathy Continuum stimulus vignettes. All the vignettes were shown in black and white. The child viewed the vignettes alone, while the experimenter waited outside the door. This was done to minimize children's reactivity to the presence of the experimenter while the films were being viewed. After each of the vignettes, the researcher entered the room and conducted the Empathy Continuum interview for that vignette.

Children also completed the TOSCA-C either before or after the EC procedure. Some of the younger children required reading assistance from the researcher in completing this measure. While children were completing their portion of the study, the

parent remained in the main lab room and completed a basic demographic questionnaire and the CBCL-P. The entire procedure took approximately 45 minutes.

Eighty-five children included in the final sample participated at their school. Three elementary schools, one located in Burnaby, BC and two located in Abbotsford, BC took part in the study. All children who returned completed consent forms were eligible to participate. Eighty of the eighty-five children who participated at school completed the TOSCA-C in small groups. Children who were eligible to participate and had returned completed consent forms were first called to an empty classroom in groups of 10-12. When they arrived, the experimenter thanked them for their interest in the research and handed out copies of the TOSCA-C. Children returned to their classroom when they had completed the TOSCA-C. Following this, each child participated individually in the EC procedure. Five of the children who participated at their school completed the TOSCA-C and the EC in a single testing session.

Parent questionnaires for those children participating in the study at their school were mailed to the parents at their home address. Follow-up phone calls to answer any questions or remind parents of the importance of their input were completed two weeks after the initial delivery of parenting packages. Fifty-seven percent of parents whose children had participated in the study at their school, completed and mailed their questionnaires back to the experimenter.

Results

Demographic variables

Seventy-three children (63.5%) of the total sample were Caucasian, 27 (23.5%)

were of Indo-Canadian descent, and 15 children (13%) reported other ethnic backgrounds. One-way analyses of variance using ethnicity as the independent variable found no significant effects of ethnicity on any of the dependent variables, which included guilt, shame, empathy, and aggression.

Socioeconomic status (SES) ratings were calculated for those children who had complete parent data ($n = 80$). SES ratings were based on the socioeconomic index for Canada, derived from 1981 Canadian census data (Blishen, Carroll, & Moore, 1987). Obtained SES scores on this measure can range from 21.00 to 101.74. For the present group of families, the mean SES rating was 46.64 ($SD = 11.05$), ranging from 24.11 to 70.19. Zero-order correlations between SES and the main variables of guilt, shame, empathy, and aggression revealed a significant, negative correlation between SES and EC total raw scores $r(79) = -.26$, $p < .05$. This result indicated that as SES increased, EC total scores decreased.

Order of administration of measures

Because of the group format of administration of the TOSCA-C measure at the schools, 84 children completed the TOSCA-C before the EC procedure (Order 1) and 26 children received the EC procedure before completing the TOSCA-C (Order 2). For five children, the order of presentation was not recorded.

Using this ordering categorization (Order 1 versus Order 2), a t-test for independent samples showed that the order effect for shame approached significance, $t(108) = -1.91$, $p = .059$. Children who participated in Order 1 had a mean shame score of 41.07 ($SD = 8.75$) while children who completed the procedure using Order 2 had a mean

shame score of 37.08 (SD = 11.06). This suggests that children who completed the TOSCA-C before the EC had a tendency to report higher levels of shame whereas children who completed the EC before the TOSCA-C reported lower levels of shame. However, for the children who participated in the study at their school, the length of time between administration of the two measures varied from hours to weeks. The 30 children who participated in the study in the lab completed both measures in one session. Therefore, any interpretation of an order effect is mitigated by the discrepancies in time between administration of the measures for the majority of children included in the present sample. Thus, it is unlikely that children's responses on these measures were affected in a meaningful way by the order of the presentation of measures.

Group vs. Individual Administration of the TOSCA-C

Thirty-five children completed the TOSCA-C individually whereas 80 children completed the TOSCA-C in a group format. One-way analyses of variance were conducted on Guilt and Shame total scale scores to assess if this difference in administration had any affect on children's reported levels of guilt and shame. Results indicated that Guilt scale scores were unaffected by administration format, F (1, 114) = .093, p = .76. However, administration format had a significant effect on children's reported Shame scale totals, F (1,114) = 4.06, $p < .05$. Children who completed the TOSCA-C in a group setting reported significantly higher Shame scale totals (M = 41.12, SD = 8.99) than did children who completed the TOSCA-C in an individual setting (M = 37.17, SD = 9.93).

Descriptive data for Guilt, Shame, Empathy and Aggression

The means of TOSCA-C-Guilt scale total scores, TOSCA-C-Shame scale total scores, Empathy Continuum total scores, and total scores of the CBCL-P Aggressive Behavior subscale are presented in Table 2. Standard deviations are presented in parentheses. These data are presented for the entire sample, within age groups, within sex groups and within age and sex groups.

Pearson product moment correlation coefficients were used to examine the zero-order relationships among the variables involved in hypothesis-testing. Table 3 provides the correlation matrix for all variables (EC-PCA, CBC-LOG, Guilt, Shame) across age groups, for both boys and girls. Table 4 displays the correlations among the variables for the younger age group, and Table 5 provides the same data for the older age group. Table 6 contains the correlations among the variables for boys and Table 7 provides the same information for girls.

As shown in Table 3, for the entire sample, age in years showed a statistically significant relationship to shame (r (113) = .22, p = .018). Older children reported higher levels of shame (M = 41.94, SD = 9.35) than did younger children (M = 37.35, SD = 8.47). EC-PCA scores showed a positive correlation with sex (r = .27, p = .003) with girls reporting higher EC total scores (M = 44.08, SD = 16.70) than did boys (M = 34.43, SD = 18.34). Guilt scores showed moderately positive relationships with sex that approached significance (r = .17, p = .063) with girls reporting somewhat higher guilt scores (M = 58.38, SD = 8.88) than did boys (SD = 55.41, SD = 8.05).

As can be seen in Table 4, in the younger age group, sex was significantly

Table 2

Means and Standard Deviations (in parentheses) for TOSCA-C Guilt scale total scores, TOSCA-C Shame scale total scores, Empathy Continuum total scores, and CBCL-P Aggressive Behavior subscale scores.

	Older			Younger			All[a]		
Measure	Overall	Boys	Girls	Overall	Boys	Girls	Overall	Boys	Girls
	(n=63)	(n=38)	(n=25)	(n=48)	(n=24)	(n=24)	(N=115)	(n=63)	(n=52)
Guilt	56.14	54.89	58.04	57.08	55.83	58.33	56.76	55.41	58.38
	(8.05)	(7.49)	(8.65)	(9.32)	(8.93)	(9.72)	(8.53)	(8.05)	(8.88)
Shame	41.94	41.84	42.08	37.35	38.88	35.83	40.09	40.79	39.23
	(9.35)	(8.78)	(10.36)	(8.47)	(7.59)	(9.17)	(9.36)	(8.37)	(10.46)
EC Total	38.56	35.53	43.16	40.06	33.88	46.25	38.79	34.43	44.08
	(18.25)	(17.76)	(18.37)	(18.19)	(19.03)	(15.29)	(18.19)	(18.34)	(16.70)
CBCL[b]	7.05	6.45	7.62	6.00	7.83	4.17	6.73	7.05	6.41
	(6.12)	(6.61)	(5.72)	(5.22)	(5.96)	(3.65)	(5.80)	(6.19)	(5.45)

[a]Includes data from 10-year old subjects, 1 boy and 3 girls, excluded from placement in older or younger group data analyses because their age was at the median split for group assignment.

[b]CBCL-P Aggressive Behavior subscale data available for 80 of the 115 subjects (20 older boys, 21 older girls, 18 younger boys, 18 younger girls, and 3 10-year old children, 1 boy and 2 girls).

positively correlated with EC-PCA scores (r (46) = .35, p = .014), with young girls reporting higher EC scores (M = 46.25, SD = 15.29) than did young boys (M = 33.88, SD = 19.03). For younger children, sex was significantly negatively correlated with CBC-LOG scores (r (46) = -.36, p = .032) with parents of young girls reporting lower levels of aggressive behavior (M = 4.17, SD = 3.65) than did parents of young boys (M = 7.83, SD = 5.96).

Table 5 details correlational relationships in the older age group. Positive relationships between Guilt and EC-PCA scores (r (61) = .28, p = .026) and Shame and EC-PCA scores (r (61) = .27, p < .034) were significant. As well, the correlation between sex and EC-PCA scores approached significance (r (61) = .22, p = .087), indicating that girls in this older group were reporting moderately higher levels of empathy (M = 43.16, SD = 18.37) than were boys (M = 35.53, SD = 17.76).

As shown in Table 7, girls showed a significant positive relationship of CBC-LOG scores with age in years (r (50) = .34, p = .029), indicating that parents of older girls reported significantly higher levels of aggressive behavior (M = 7.62, SD = 5.72) than did parents of younger girls (M = 4.17, SD = 3.65).

Table 3

Pearson-product moment correlation coefficients for entire sample (N=115)

	YEARS	SEX	GUILT	SHAME	EC-PCA	CBC-LOG[a]
YEARS	--	-.12	-.08	.22*	.03	.11
SEX		--	.17[+]	-.08	.27**	-.05
GUILT			--	.34**	.14	-.05
SHAME				--	.09	.02
EC-PCA					--	.07
CBC-LOG[a]						--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years; Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=80).
*p < .05; **p ≤ .005; [+]p = .063.

Table 4

Pearson-product moment correlation coefficients for Younger age group (n=48)

	SEX	GUILT	SHAME	EC-PCA	CBC-LOG[a]
SEX	--	.14	-.18	.35*	-.36*
GUILT		--	.30*	.03	-.17
SHAME			--	-.07	-.07
EC-PCA				--	-.12
CBC-LOG[a]					--

NOTE. Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=36).
*$p < .05$.

Table 5

Pearson-product moment correlation coefficients for Older age group (n=63)

	SEX	GUILT	SHAME	EC-PCA	CBC-LOG[a]
SEX	--	.19	.01	$.22^{+}$	.18
GUILT		--	.40*	.28*	.05
SHAME			--	.27*	.08
EC-PCA				--	.26
CBC-LOG[a]					--

NOTE. Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=41).
*$p \leq .05$; $^{+}p = .087$.

Table 6

Pearson-product moment correlation coefficients for Boys (n=63)

	YEARS	GUILT	SHAME	EC-PCA	CBC-LOG[a]
YEARS	--	-.04	.20	.12	-.12
GUILT		--	.38*	.03	-.001
SHAME			--	.14	.01
EC-PCA				--	.19
CBC-LOG[a]					1.00

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years.
[a]CBCL data (n=39).
*p < .005

Table 7

Pearson-product moment correlation coefficients for Girls (n=52)

	YEARS	GUILT	SHAME	EC-PCA	CBC-LOG[a]
YEARS	--	-.09	.23	.01	.34*
GUILT		--	.34*	.17	-.08
SHAME			--	.11	.04
EC-PCA				--	.02
CBC-LOG[a]					--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years.
[a]CBCL data (n=41).
*p < .05

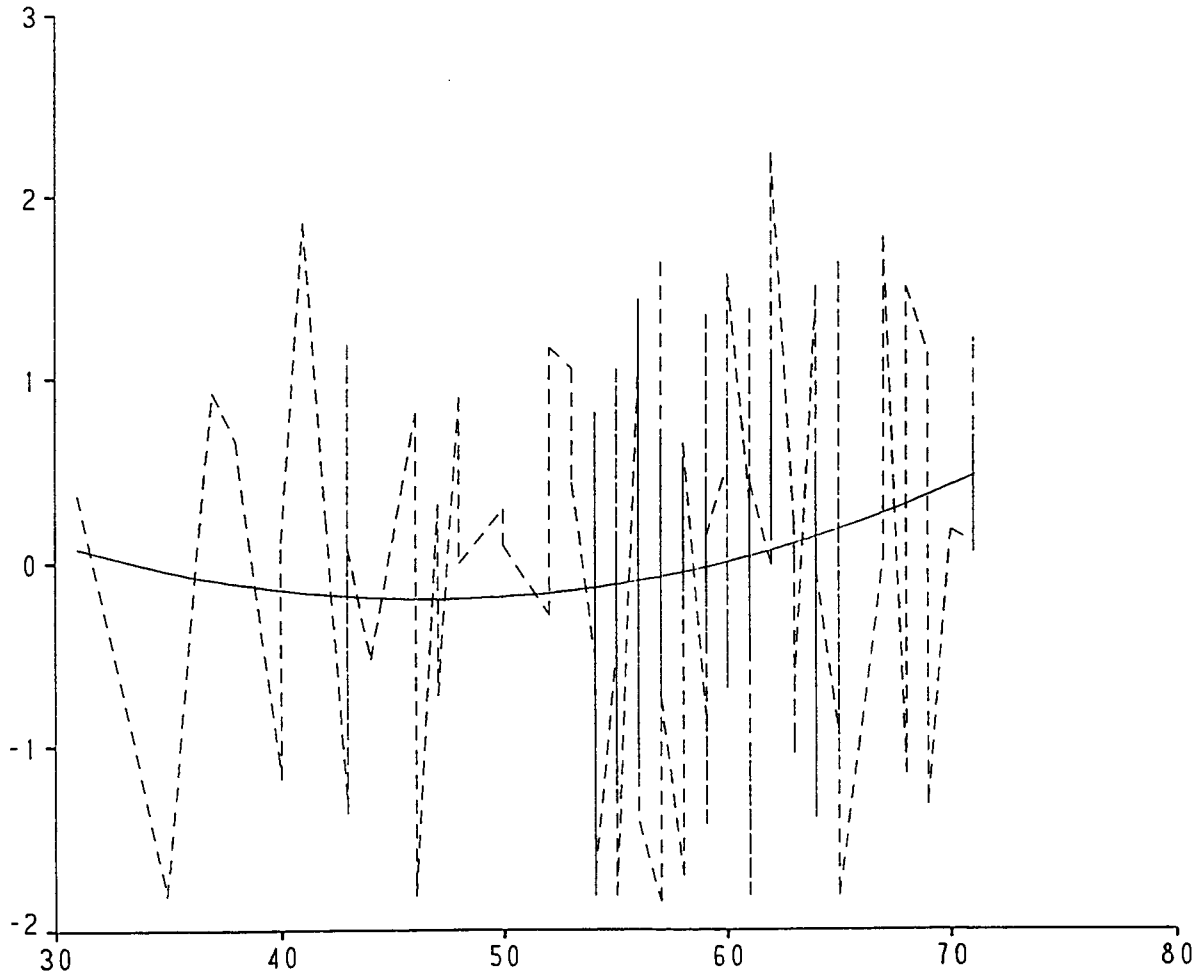
Revisions of Present Hypotheses

The regression analyses as described above for Hypotheses 1 through 4 revealed no statistically significant findings. For example, regression analyses for Hypothesis 1, assessing the curvilinear relationship between guilt and empathy, resulted in an R^2 of .03 and an adjusted R^2 of .01. Regression analyses for Hypotheses 2 through 4 revealed R^2 and adjusted R^2 values ranging from -.02 to .01. As an illustration of the regression analysis for Hypothesis 1, Figure 1 shows the regression equation model. This model showed a tendancy for curvilinearity, but, as stated above, it failed to reach statistically significant levels.

Furthermore, after reviewing the correlational data, it became clear that the present hypotheses could not be assessed as applying generally across subjects. When the pattern of correlations was compared across age groups (Table 4 and 5), and across sex groups (Table 6 and 7), it appeared that relationships between pairs of variables were conditional upon children's sex and age. Based on previous research, the hypotheses originally formulated regarding relationships among guilt, shame, empathy and aggression did not incorporate the possible moderating effects of sex or age. Present findings suggested that our knowledge of relationships among guilt, shame, empathy and aggression was best advanced by a more detailed examination of how these variables interrelate. For this reason, the focus of the analyses shifted from the hypotheses as originally presented to an exploration of the relationships among guilt and shame to empathy and aggression in the four age by sex groups.

Figure 1

Quadratic model of regression equation for Hypothesis 1: Guilt and empathy.



The appropriate data analytic technique for the exploration of the relationships among the variables in the present age by sex groups was principal component analyses. Principal components analyses permit examination of multiple relationships within groups of small size. Regression analyses, as originally suggested for investigating the previously stated hypotheses, could not be completed within each age by sex group, because of the small number of children. Instead, the results of the principal component analyses, considered in terms of boys and girls, and both older and younger children, is now presented. The results below clarify the different relationships among the variables as they appeared in the four age by sex groups.

Table 8 shows the zero-order correlations among guilt, shame, empathy and aggression for the younger boys, and Table 9 provides this information for younger girls. Table 10 shows the zero-order correlations for older boys and Table 11 provides this information for older girls. In order to explore the relationships among the variables for the different age by sex groups, principal component analyses, with varimax rotations, were conducted for each age by sex group with guilt, shame, empathy and aggression. The scores for each of the variables derived from the first principal component were plotted against the corresponding scores derived from the second principal component within each age by sex group. This permits us to graphically represent the relationships among the main variables. The degree of relationship is shown in each figure by the degree to which points are related in two-dimensional space. For those variables that are positively

Table 8

Pearson-product moment correlation coefficients for Younger Boys (n=24)

	GUILT	SHAME	EC-PCA	CBC-LOG[a]
GUILT	--	.28	-.15	-.21
SHAME		--	.24	-.25
EC-PCA			--	.03
CBC-LOG[a]				--

[a]CBCL data (n=18).

Table 9

Pearson-product moment correlation coefficients for Younger Girls (n=24)

	GUILT	SHAME	EC-PCA	CBC-LOG[a]
GUILT	--	.38*	.14	-.03
SHAME		--	-.24	-.07
EC-PCA			--	.05
CBC-LOG[a]				--

[a]CBCL data (n=18).
*p = .069.

Table 10

Pearson-product moment correlation coefficients for Older Boys (n=38)

	GUILT	SHAME	EC-PCA	CBC-LOG[a]
GUILT	--	.46*	.24	.13
SHAME		--	.10	.20
EC-PCA			--	.35
CBC-LOG[a]				--

[a]CBCL data (n=20).
*p < .005

Table 11

Pearson-product moment correlation coefficients for Older Girls (n=25)

	GUILT	SHAME	EC-PCA	CBC-LOG[a]
GUILT	--	.34[+]	.26	-.18
SHAME		--	.49*	-.14
EC-PCA			--	.06
CBC-LOG[a]				--

[a]CBCL data (n=21).
*p < .05; [+]p = .098.

related, the angle that is formed between the lines connecting the points to the axes is less than 90 degrees. For those variables that are negatively related, the angle that is formed between the lines connecting the points to the axes is greater than 90 degrees. Angles of 90 degrees indicate no correlation between the variables. As well, the relative length of the arrows is indicative of the degree to which variables are related. Those arrows that are of similar length are more closely related than are those that are of differing lengths. Table 12 summarizes the directional pattern of relationships among guilt, shame, empathy and aggression for the four age by sex groups. The results for each group are described below.

For descriptive purposes, the following ranges in the principal component loadings will be used to describe the variables within groups. Principal component loadings ranging between 0.000 and .399 will be described as "small", while loadings between .400 and .699 will be described as "moderate". Loadings above .700 will be described as "high".

Younger boys

As is shown in Table 8, no statistically significant correlations were detected among the main variables for the younger boys. Principal component analyses, with a varimax rotation, revealed two components with eigenvalues greater than one, accounting for 64.2 percent of the cumulative variance. Guilt loaded highly and positively on the first component (.719) whereas CBC-LOG loaded highly but negatively (-.766). Shame showed a moderate positive relationship to the first component (.419) while EC-PCA showed a small, negative relationship to the first component (-.213). On the second

Table 12

Summary of directional relationships among guilt, shame, empathy and aggression in the age by sex groups.

		GUILT	SHAME
EMPATHY	Young Boys	–	+
	Young Girls	+	–
	Older Boys	+	**NS**
	Older Girls	+	+
AGGRESSION	Young Boys	–	–
	Young Girls	**NS**	**NS**
	Older Boys	+	+
	Older Girls	–	–

component, EC-PCA (.854) and Shame (.706) loaded highly and positively while Guilt and CBC-LOG showed small, negative relationships, with loadings of -.071 and -.110 respectively.

As illustrated in Figure 2, for the group of younger boys, empathy and guilt appear to be negatively related whereas empathy and shame appear positively related. Aggression appears to be negatively related to both guilt and shame and unrelated to empathy. Guilt and shame appear to be positively related to one another.

Younger girls

As was the case with younger boys, for the group of younger girls, zero-order correlations did not reveal statistically significant correlations among the main variables of interest (Table 9). Principal component analyses, with a varimax rotation, revealed two components with eigenvalues greater than one, accounting for 63.4 percent of the cumulative variance. Guilt and Shame loaded highly and positively on the first component (.829 and .773, respectively). EC-PCA showed a small, positive relationship to the first component (.259) whereas CBC-LOG showed a small, negative relation to the first component (-.238). On the second component, EC-PCA (.811) loaded highly and positively while CBC-LOG (.549) showed a moderate, positive relationship. Guilt (.263) and Shame (-.317) showed small relationships to the second component.

As illustrated in Figure 3, for the group of younger girls, empathy and guilt appear positively related whereas empathy and shame appear negatively related. Aggression appears to be unrelated to empathy, guilt and shame. Guilt and shame appear to be positively related to one another.

Figure 2

Principal component loadings of guilt, shame, empathy and aggression for Younger Boys.

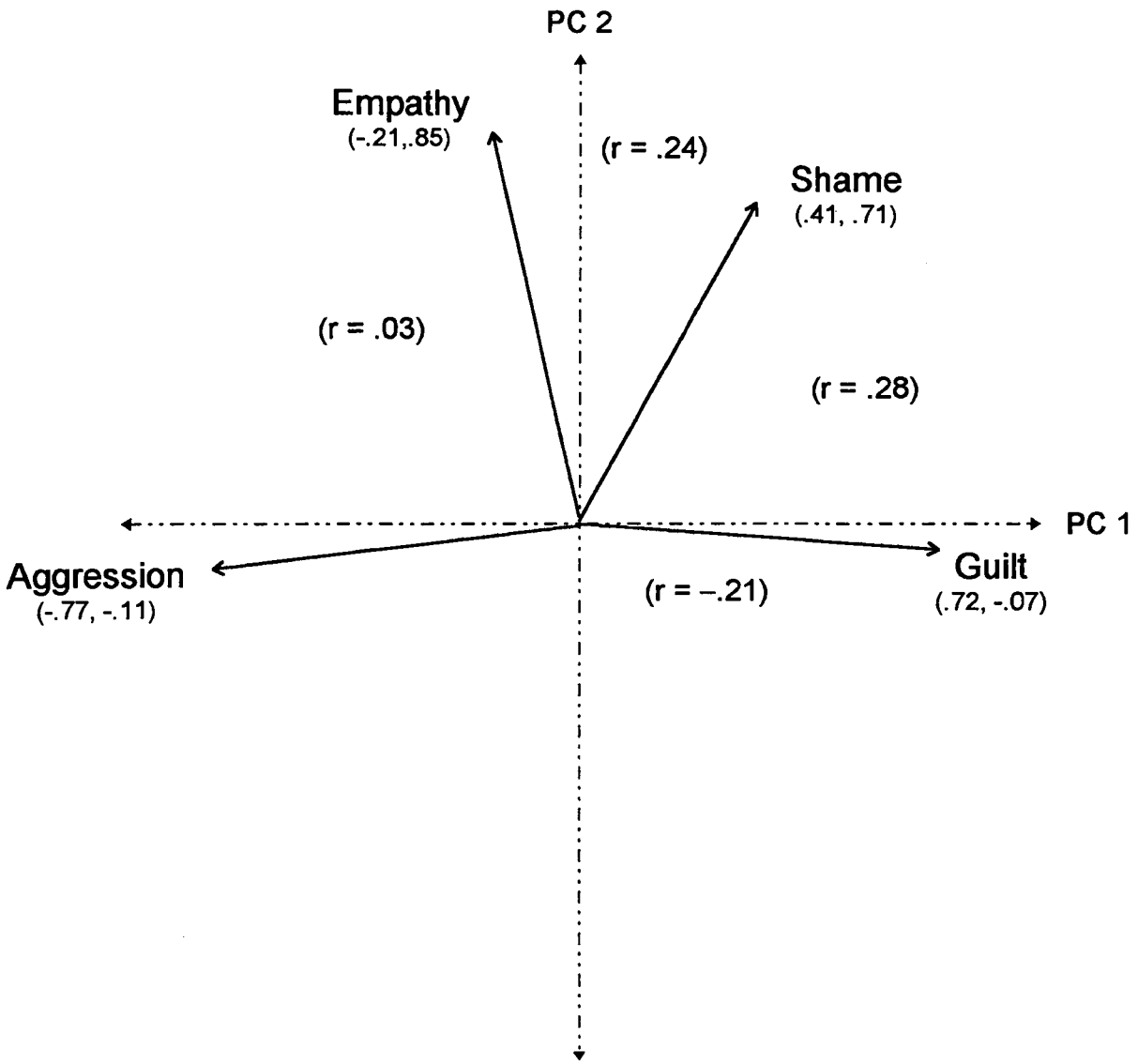
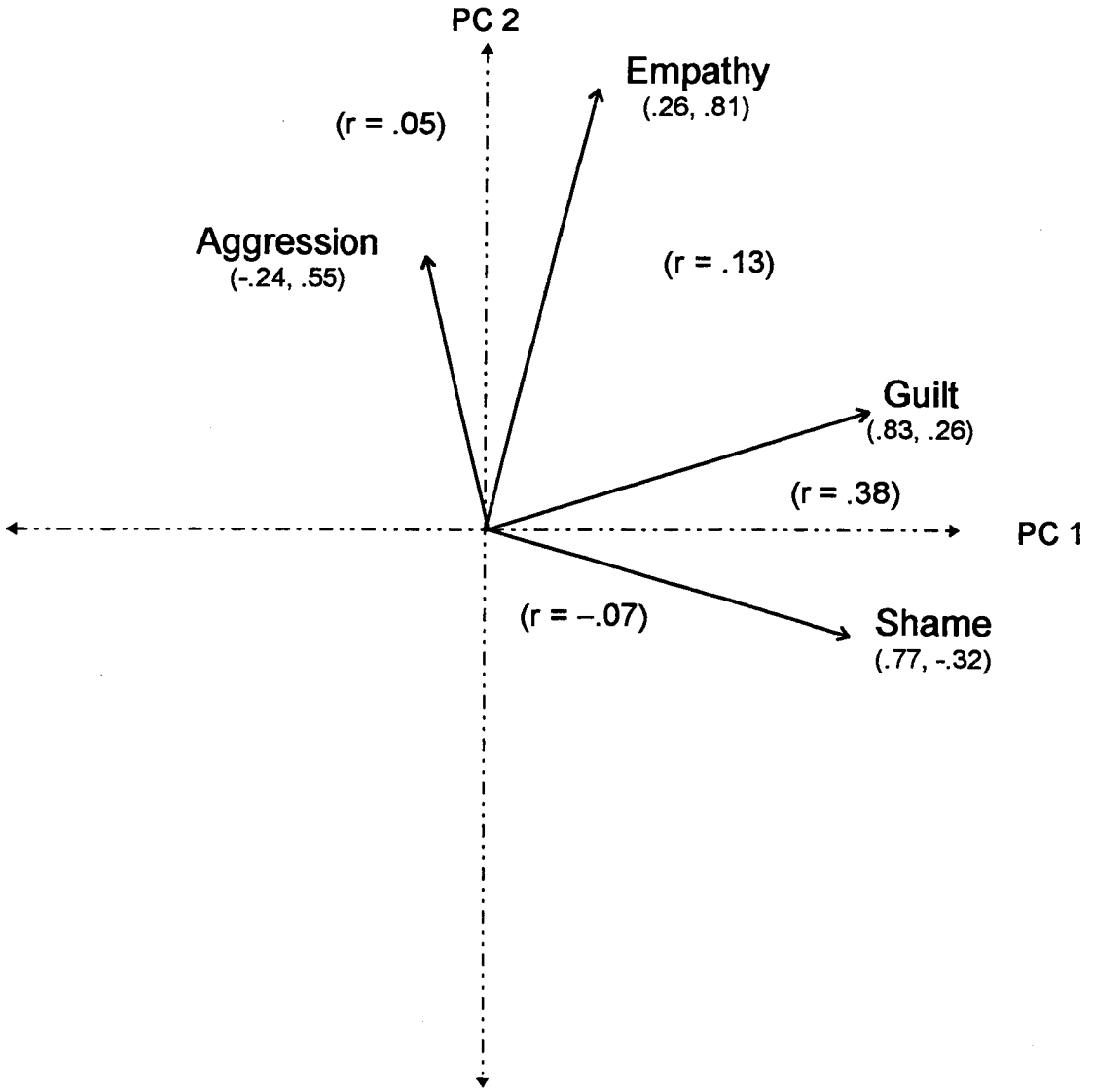


Figure 3

Principal component loadings for guilt, shame, empathy, and aggression for Younger Girls.



Older boys

As can be seen in Table 10, for the group of older boys, zero-order correlations among the variables revealed a statistically significant, positive correlation of guilt and shame (r (36) = .46, p = .004). Principal component analyses, with a varimax rotation, revealed two components with eigenvalues greater than one, accounting for 72.5 percent of the cumulative variance. Guilt and shame loaded highly and positively on the first component, with loadings of .836 and .899, respectively. EC-PCA (.035) and CBC-LOG (.134) were minimally related to the first component. On the second component, EC-PCA and CBC-LOG loaded highly and positively, with respective loadings of .856 and .771. Guilt showed a small, positive relationship to the second component, with a loading of .211 whereas Shame showed a small, negative relationship with the second component with a loading of -.014.

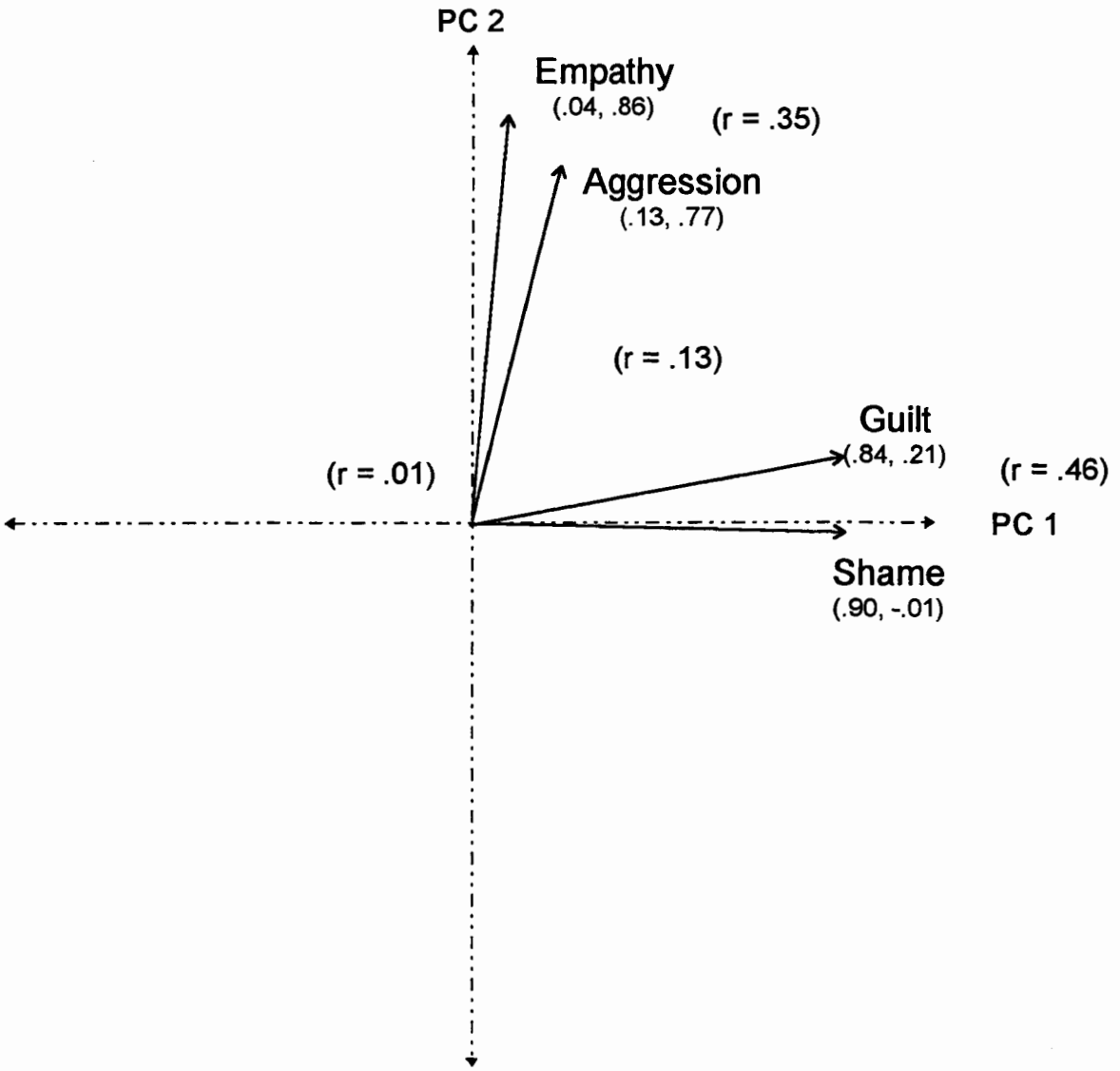
As illustrated in Figure 4, for the group of older boys, empathy and aggression appear positively related, as do guilt and shame. Guilt and empathy also appear positively related, as do guilt and aggression. Shame appears positively related to aggression and unrelated to empathy.

Older girls

Table 11 shows the zero-order correlations among the main variables for the older girls. For this group, Shame and EC-PCA show a significant positive correlation (r (23) = .49, p = .014), which indicates that as shame scores rise, so do empathy scores. Guilt and Shame were also positively correlated, and this correlation approached statistical significance (r (23) = .34, p = .098). Principal component analyses, with a varimax

Figure 4

Principal component loadings of guilt, shame, empathy and aggression for Older Boys.



rotation, revealed two components with eigenvalues greater than one, accounting for 67.3 percent of the cumulative variance. EC-PCA and Shame loaded highly and positively on the first component, with respective loadings of .855 and .757. Both Guilt (.303) and CBC-LOG (.153) showed small, positive relationships to the first component. On the second component, CBC-LOG scores loaded highly and negatively (-.811). Guilt showed a moderate, positive relationship to the second component (.673), and Shame showed a small, positive relationship (.370). EC-PCA showed a small, negative relationship to the second component (-.160).

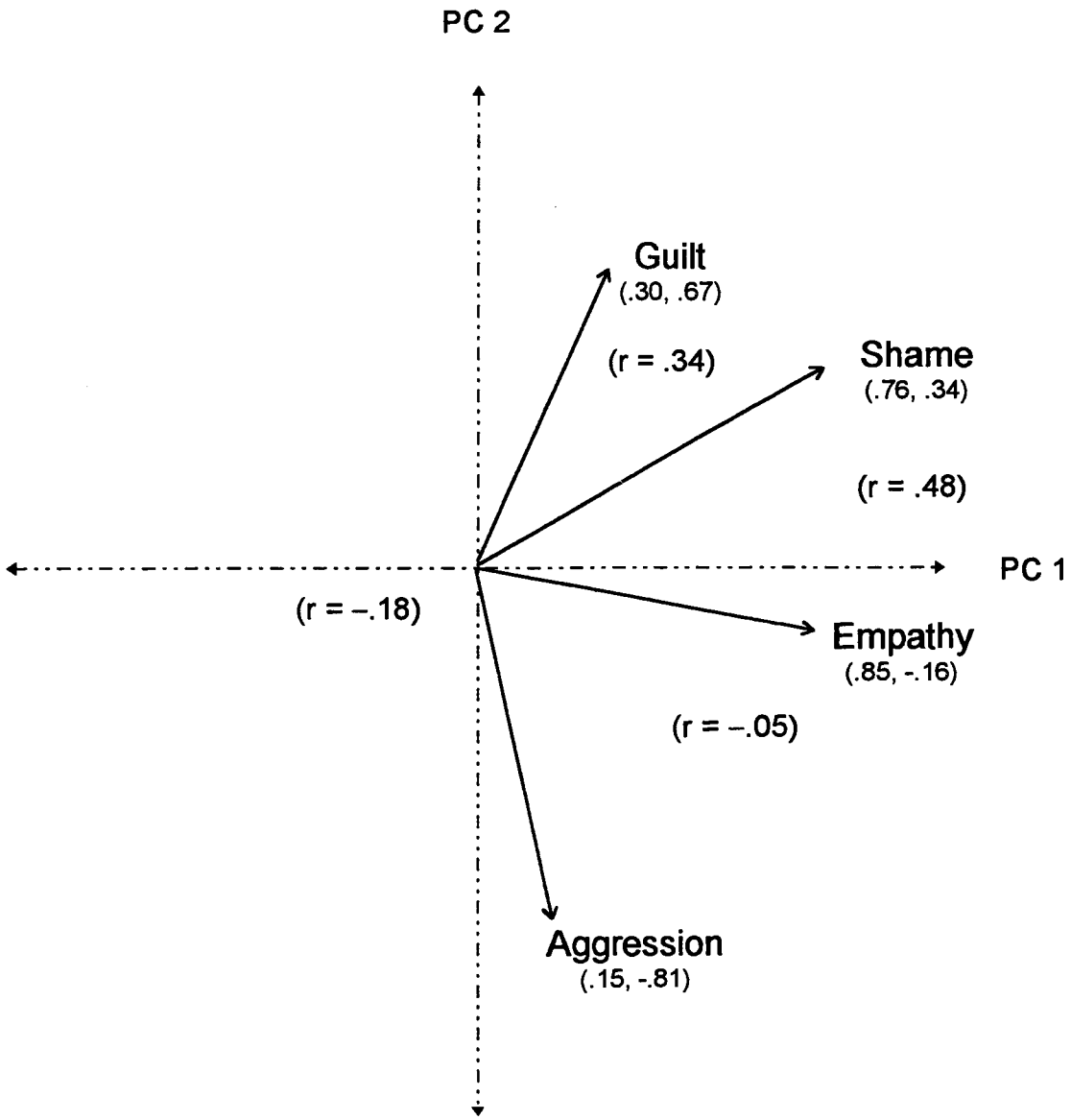
As illustrated in Figure 5, for the group of older girls, empathy and shame appear positively related. Empathy and guilt are also positively related. Both guilt and shame appear negatively related to aggression. Finally, guilt and shame are positively related.

Hypothesis 5: Sex differences in guilt and shame scores

Hypothesis 5 stated that girls would report higher guilt and shame scores than would boys. Two one-way analyses of variance were conducted to test this hypothesis. Guilt and shame scores were analyzed using two levels of children's sex as a factor (1 = male, 2 = female). The main effect of children's sex on mean guilt scores approached significance, $\underline{F}$ (1,113) = 3.54, $\underline{p}$ = .063, with girls reporting slightly higher guilt scores ($\underline{M}$ = 58.38, $\underline{SD}$ = 8.88) than did males ($\underline{M}$ = 55.41, $\underline{SD}$ = 8.05). The main effect of children's sex on mean shame scores was not significant, $\underline{F}$ (1,113) = .79, $\underline{p}$ = .375.

Figure 5

Principal component loadings of guilt, shame, empathy and aggression for Older Girls.



Other findings:

Because of the consistent significant positive correlations between guilt and shame in all comparison groups, partial correlation coefficients were calculated. One set of partial correlations examined the relationships among guilt, EC-PCA and CBC-LOG scores while holding shame constant. Tables 13 to 17 show these partial correlation coefficients for the different age by sex groups in this study. Another set of partial correlations examined the relationships among shame, EC-PCA and CBC-LOG scores while holding guilt constant. Table 18 through 22 show these partial correlation coefficients for the present age by sex groups.

Partial correlations of guilt, holding shame constant, for all participants, showed a statistically significant, positive correlation of guilt and sex ($\underline{pr}$ (112) = .22, $\underline{p}$ = .047) replicating this relationship in the zero-order correlations (Table 2). Partial correlation coefficients failed to support the statistically significant positive correlation of guilt and empathy, in older children, as previously seen in Table 5.

Partial correlation coefficients of shame, holding guilt constant, replicated the significant positive zero-order correlation of age in years with shame across age and sex groups ($\underline{pr}$ (112) = .31, $\underline{p}$ = .005). The positive relationship of shame with empathy in older children found in the zero-order correlation coefficients (Table 5), was not replicated in the partial correlational findings. Partial correlation coefficients showed a significant positive relationship of age in years and shame, for girls ($\underline{pr}$ (49) = .41, $\underline{p}$ = .008).

Table 13

Partial correlation coefficients for GUILT, holding SHAME constant (n=115)

	YEARS	SEX	GUILT	EC-PCA	CBC-LOG[a]
YEARS	--	-.05	-.17	.05	.12
SEX		--	.22*	.34**	-.05
GUILT			--	.12	-.01
EC-PCA				--	.03
CBC-LOG[a]					--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years; Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=80).
*$p \leq .05$; **$p \leq .005$.

Table 14

Partial correlation coefficients for GUILT, holding SHAME constant for Younger age group (n=48)

	SEX	GUILT	EC-PCA	CBC-LOG[a]
SEX	--	.24	.43*	-.40*
GUILT		--	.17	-.09
EC-PCA			--	-.12
CBC-LOG[a]				--

NOTE. Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=36).
*p < .05.

Table 15

Partial correlation coefficients for GUILT, holding SHAME constant for Older age group (n=63)

	SEX	GUILT	EC-PCA	CBC-LOG[a]
SEX	--	.18	.25	.08
GUILT		--	.12	.04
EC-PCA			--	.11
CBC-LOG[a]				--

NOTE. Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=41).

Table 16

Partial correlation coefficients for GUILT, holding SHAME constant for Boys (n=63)

	YEARS	GUILT	EC-PCA	CBC-LOG[a]
YEARS	--	-.14	.14	-.07
GUILT		--	.01	.06
EC-PCA			--	.16
CBC-LOG[a]				--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years.
[a]CBCL data (n=39).

Table 17

Partial correlation coefficients for GUILT, holding SHAME constant for Girls (n=52)

	YEARS	GUILT	EC-PCA	CBC-LOG[a]
YEARS	--	-.18	-.01	.36*
GUILT		--	.08	-.06
EC-PCA			--	-.08
CBC-LOG[a]				--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years.
[a]CBCL data (n=41).
*$p < .05$.

Table 18

Partial correlation coefficients for SHAME, holding GUILT constant (n=115)

	YEARS	SEX	SHAME	EC-PCA	CBC-LOG[a]
YEARS	--	-.01	.31*	.08	.10
SEX		--	-.01	.33*	-.05
SHAME			--	.03	-.04
EC-PCA				--	.03
CBC-LOG[a]					--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years; Children's sex was coded with boy = 1 and girl = 2.

[a]CBCL data (n=80).

*$p \leq .005$.

Table 19

Partial correlation coefficients for SHAME, holding GUILT constant for Younger age group (n=48)

	SEX	SHAME	EC-PCA	CBC-LOG[a]
SEX	--	-.23	.40*	-.34*
SHAME		--	-.04	-.16
EC-PCA			--	-.10
CBC-LOG[a]				--

NOTE. Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=36).
*p < .05.

Table 20

Partial correlation coefficients for SHAME, holding GUILT constant for Older age group (n=63)

	SEX	SHAME	EC-PCA	CBC-LOG[a]
SEX	--	.17	.25	.08
SHAME		--	.13	.05
EC-PCA			--	.11
CBC-LOG[a]				--

NOTE. Children's sex was coded with boy = 1 and girl = 2.
[a]CBCL data (n=41).

Table 21

Partial correlation coefficients for SHAME, holding GUILT constant for Boys (n=63)

	YEARS	SHAME	EC-PCA	CBC-LOG[a]
YEARS	--	.19	.14	-.07
SHAME		--	.02	-.02
EC-PCA			--	.16
CBC-LOG[a]				--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years.
[a]CBCL data (n=36).

Table 22

Partial correlation coefficients for SHAME, holding GUILT constant for Girls (n=52)

	YEARS	SHAME	EC-PCA	CBC-LOG[a]
YEARS	--	.41*	.02	.31[+]
SHAME		--	.05	-.05
EC-PCA			--	-.08
CBC-LOG[a]				--

NOTE. Years is coded as 8,9,10,11,12 - corresponding to children's age in years.
[a]CBCL data (n=41).
*$p < .01$; [+]$p = .054$.

Discussion

It is clear from the findings of all four groups (younger boys and girls; older boys and girls) that no simple generalizations can be made across age or across sex. That is , results for older boys differ from those of older girls. Results for older boys also differ from those of younger boys. Therefore, each group in the present study represents an "individually unique" pattern of relationships among the variables. What seems most appropriate to conclude, in general, from the present findings is that guilt, shame, empathy and aggression relate in different ways for boys and girls at different ages in middle to late childhood. Therefore, each of the hypotheses regarding relationships among guilt, shame, empathy and aggression will be considered in turn. Unique results that are revealed within each hypothesis for particular groups will be considered relative to findings that are common among more than one group. Findings will be considered with respect to relevant theoretical considerations and previous empirical data, pertinent to the present questions.

Guilt and empathy

Guilt and empathy were predicted to show a curvilinear relationship, with moderate scores of guilt relating most highly with high scores on empathy. The hypothesized curvilinear relationship could not be assessed within the age by sex groups. Principal components analyses revealed that for younger girls, older boys and older girls, guilt and empathy were positively related. This finding accords with previous research which found guilt and empathy to be positively related in school-age children (Tangney et al., 1991). However, in the younger boys, guilt and empathy showed a moderate negative

relationship. This negative relationship between guilt and empathy for the group of younger boys will be discussed compared to the other three groups in the present study below.

One possible explanation for the negative relationship between guilt and empathy in younger boys concerns differing socialization experiences from girls which influence boys' development. Inductive discipline focuses on the impact of one's actions upon other people, a process which is facilitated by empathic responsiveness to another person's emotional state (Hoffman, 1975). Power assertive techniques, which focus on physical punishment, and love-withdrawal techniques do not highlight the negative behavior but, instead, focus more globally on the "self" of the child. Parents of boys report using less inductive discipline and more techniques that emphasize the use of power with their children (Hoffman, 1975), a pattern that might lower children's guilt. However, the child-rearing environment most often linked with the development of guilt and effective internalization of parental standards is one in which low-power discipline is utilized (Kochanska, 1991). Therefore, it may be that for younger boys, their socialization promotes less internalization of guilt than occurs for their female age-mates.

In the group of younger girls, in contrast to the group of younger boys, guilt showed a positive relationship with empathy. Guilt is hypothesized to be an emotion which focuses on the effects of one's actions. Empathy is an emotional state which highlights another person's affect. A focus on one's actions, coupled with empathic responsiveness to another's distress are an integral part of effective inductive discipline techniques (Hoffman, 1975; Kochanska, 1991). Parents of young girls use more inductive

discipline techniques when disciplining their female children (Hoffman, 1975). Furthermore, parents of young girls focus on the impact of transgression on relationships, highlighting the effect of their actions on their connections to other people (Hoffman, 1975). In this way, girls come to focus on the effects of their actions on the emotional states of others. Through inductive discipline techniques, young girls, compared to young boys, may be more likely to internalize guilt responses to transgression, and to display care-taking behaviors in response to distress in others. This emotional "training" is likely facilitated by the focus parents of young girls place on their ability to respond to others. In this way, other-oriented empathic reactions and reparative behaviors may become intrinsically linked to transgressions in the emotional repertoire of young girls at a younger age, and to a greater degree than for young boys.

The negative relationship between guilt and empathy in younger boys may have had to do with the young boys' relative immaturity. As this negative relationship between guilt and empathy was not replicated for other groups in the present study, the younger boys in this sample may have represented a comparatively immature group of children, and this may have played a part in their anomalous results.

Although a direct measure of cognitive development was not incorporated in the present study, a closer inspection of EC scores may help to clarify the effect of maturity on the present findings. EC scores rest upon a determination not only of the emotional response of respondents, but also on the cognitive attribution that respondents give for their emotional state. In this way, EC scores can represent a measure of respondents' cognitive maturity regarding affect. The younger boys had the lowest mean EC scores.

This indicates that, relative to the other groups, the younger boys were less cognitively mature. Guilt is considered to be more cognitively demanding that other moral emotions, as development of the cognitive attributes of guilt continue throughout middle to late childhood (Ferguson & Stegge, 1995). In this way, young boys developmental immaturity may have contributed to the finding that empathy and guilt were negatively related for this particular group.

For older boys and older girls, guilt appeared to be positively related to empathy. The positive relationship between guilt and empathy was diametrically opposed to the negative relationship of guilt and empathy found in younger boys. As stated above, guilt is considered a more "mature" emotion (Ferguson & Stegge, 1995). It may be that older children have reached a level of development such that their levels of empathy may inform their guilt experiences. This may be beyond the capacities of younger boys.

Shame and empathy

It was hypothesized that shame and empathy would show a negative relationship. In fact, this finding occurred only for the group of younger girls. Empathy and shame were positively related in younger boys and in older girls. In older boys, shame and empathy appeared unrelated. The similar results for younger boys and older girls will be discussed first. A consideration of the different results for younger girls and for older boys will then follow.

As the positive relationship between shame and empathy was found both for younger boys and older girls, considerations of age and gender are not potential explanations for these results. Another possible explanation is based on a theoretical view

of empathy which highlights competing behavioral motivations that may be engendered by empathic responsiveness to another person's distress.

Miller and Eisenberg (1988) describe two possible motivations which can result as a function of empathic responsiveness to another's distress. The first motivation results when people over-identify with the distress of the other person, causing them to feel an uncomfortable level of subjective distress. This, in turn, leads them to turn their focus away from the other person and, instead, to focus on themselves. The second motivation results when people feel sympathy for the person in distress which motivates them to act in ways that alleviate the other person's distress (Miller & Eisenberg, 1988). Feeling a sense of responsibility for another person's plight, when coupled with sympathetic concern, has been found to relate to children's motivation to help others (Chapman, Zahn-Waxler, Cooperman, & Iannotti, 1987).

These motivations resulting from personal distress and sympathy seem very much like the descriptions of the behavioral consequences of guilt and shame experiences. Personal distress seems like the description of the self-focus seen in shame. The reparative motivations described as a result of empathic sympathy are like the other-person- focus seen in the behaviors of guilty people. Viewed in this way, one's ability to empathically respond to another person, and the propensity to react to this distress in either a self-focus or other-person-focus may be distinct, yet complementary, processes. In this way, the younger boys and older girls in the present study could be empathically responsive to others' emotional states, yet may be reacting to this vicarious emotional distress in a self-focused manner, analogous to the behaviors typical of shame. In this way, empathic

responsiveness and the propensity to react to empathic distress with a focus on the self may be positively related in younger boys and older girls. Possible explanations for the self-focus evident in the younger boys and older girls will be considered next. It may be that there are different reasons for similar results in these two groups.

Younger boys appear to endorse behaviors that are indicative of a self-focus (shame), rather than an other-person-focus (guilt). Younger boys may show this tendency for several reasons. One of the main contributions to the preponderance in boys of self-focused behaviors may be socialization practices. Socialization for girls seem to focus on the maintenance of connections with other people, whereas boys' socialization experiences appear to foster autonomy and independence (Hoffman, 1975). For this reason, girls may be more likely than boys to be socialized to respond to distress in others with nurturing, care-giving behavior, behavior indicative of an other-person-focus. Conversely, boys may be socialized to display instrumental, problem-focused behavior, and thus, might appear to react to distress in others in a self-focused way.

For older girls, shame and empathy showed a significant, positive relationship. Furthermore, these older girls had the highest levels of reported shame across all groups. This seems to indicate that, despite older girls' higher empathic capabilities, they show a propensity toward self-focused distress when confronted by distress in other people. Older girls may be more likely to focus on their selves due to other developments at this time in their lives.

In terms of age, the older girls in the present study are beginning to evidence the signs of puberty. Behaviorally, parents of older girls reported the highest mean score of

all groups on the Aggressive Behavior subscale on the CBCL-P. A closer inspection of the items which load on the scale indicates that many of these behaviors are typical of emotionally labile adolescent girls, such as moodiness, sulking and irritability. The relatively high scores that the older girls' parents endorsed on the aggression measure may be indicative of the immediacy with which these girls were feeling the onset of puberty.

Severino, McNutt and Feder (1987) describe adolescence as a "...developmental phase in which there is a heightened vulnerability to the affect of shame. The adolescent must deal with the (physical) transformations of puberty, disengage from childhood objects, and establish a sense of separate and distinct identity..." (p. 96). Some authors suggest that this process may be even more difficult for girls than it is for boys. Pipher (1994) describes her clinical experiences with girls of the same age as those in the present study. She describes the pre-adolescent and early adolescent years as a period in girls' development which is particularly turbulent, characterized by lower self-esteem, lower achievement motivation and an increased vulnerability to emotional disorders (Pipher, 1994).

Pre-adolescent girls appear acutely aware of the evaluations of others, even more so than their male age-mates (Pipher, 1994). The results of the present study suggest that this awareness in girls is also accompanied by a significantly greater capacity for empathic responsiveness. A greater awareness of the evaluative stance of other people, heightened by the increased ability to empathize with other people, may result in both empathy with others and a self-focused reaction to distress in other people. Pre-adolescence, with shame's primacy of influence, may represent a transient period in girls' development of

self-conscious emotion. Later in development, the positive relationship between guilt and empathy as seen in young girls may re-emerge after the tumult of adolescence has receded. Thus, for these reasons, older girls appear to show a closer relationship of shame with empathy, than of guilt with empathy.

The relationship of shame and empathy in younger girls was negative. This indicates that for younger girls, the self-focus of shame was incompatible with their empathic responsiveness. It would appear then that younger girls' empathic reactions may be characterized by an other-person focus, unlike those of younger boys and older girls. The socialization differences between boys and girls described above may encourage younger girls to display helping behaviors more consistently than do boys, in reaction to distress observed in other people. Furthermore, because of their relative youth in comparison to the older girls, these younger girls may be at an age where they have yet to feel the negative emotional ramifications of puberty and the onset of adolescence. These young girls may not yet display the overt awareness of evaluation that is characteristic of older preadolescent and adolescent girls.

Shame appeared unrelated to empathy in the older boys. This null, rather than negative, finding was somewhat surprising in light of previous research that highlights the importance of empathy in the incidence of boys' prosocial behavior (Roberts & Strayer, in press). This previous research would indicate that for boys, in particular, empathy must support an other-person-focus in order to mediate boys' prosocial behavior. Shame, with its emphasis on self-focus, would seem to compromise this other-person-oriented empathic process. Thus, one would expect that for boys' the relationship between shame

and empathy would be negative, as was seen for boys at a younger age.

Research with toddlers seems to suggest that boys are less prone to show shame in reaction to task failure (Lewis, Alessandri, & Sullivan, 1992). As well, male toddlers are more likely than are female toddlers to show guilt, in terms of behaviors that are considered reparative in response to mishaps where they are responsible for breaking another person's possession (Barrett, Zahn-Waxler, & Cole, 1993). The younger boys in the present study seem to be showing a self-focus in reaction to distress in others, whereas, the older boys are showing an imperviousness to self-focused distress similar to that which was observed in boys in toddlerhood. Perhaps, the younger boys' propensity to focus on themselves in reaction to distress in others represents a developmental phase, and the results for the older boys represents a return to the patterns of emotional functioning apparent earlier in the lifespan.

Another possibility may be the older boys may not be experiencing the onset of puberty to the same degree as the girls in the present study. Girls appear to mature more quickly than do boys, and experience the onset of puberty earlier in development. Perhaps, the boys have yet to experience the negative emotional ramifications that the intense adolescent self-focus entails. For this reason, boys' empathic reactions are as yet unaffected by the onset of puberty, and thus, the self-focus engendered by shame does not influence boys' empathic reactions to others.

Guilt, shame, and aggression

It was predicted that guilt scores would show a curvilinear relationship to aggression, with those scoring moderately on the measure of guilt, showing the lowest

scores on the measure of aggression. Shame was expected to show a positive relationship with aggression.

The results of the present study indicate that the patterns of relationships for these variables were different depending upon age and sex. Both guilt and shame were negatively related to the incidence of aggression for the younger boys and the older girls. For older boys, both guilt and shame were positively related to the incidence of aggression. Finally, for the younger girls, both guilt and shame were unrelated to the incidence of aggression. Relationships for both guilt and shame with aggression will be discussed together, for each of the age by sex groups.

For younger boys and older girls, both guilt and shame were negatively related to the incidence of aggressive behavior. This seems to imply that for both these groups of children, guilt and shame are important in the regulation of aggressive behavior. This makes sense as both guilt and shame should show some influence on aggressive behavior, as aggression violates both moral and social standards.

Guilt and shame were both unrelated to aggression in younger girls. The likely reason behind this was the very low rates of aggressive behavior endorsed by the parents of the young girls. The mean level of aggressive behavior reported for this sample of young girls was 4.17, compared to the mean level of 7.0 reported for a normative group of non-clinical female age-mates (Achenbach, 1991). Four parents, 16.7 percent of the present sample, reported no incidences of aggressive behavior in their young female children, and another four parents reported ranges of aggressive behavior that fall in the "questionable" range, indicative of under-reporting (Achenbach, 1991). This extremely

low rate of aggressive behavior may indicate some guardedness on the part of the parents, a tendency perhaps to minimize any problems their children may be displaying and to portray their children in an overly positive light. It may be that the predicted relationships among guilt, shame and aggression would be supported if rates of aggressive behavior, as reported by parents, were in a range that would allow for investigation. However, particularly in the present sample of young girls, reporting rates were too low to permit these relationships to be examined.

In the older boys, both guilt and shame showed moderate, positive relationships with aggression. Furthermore, in this group of older boys, empathy and aggression showed a strong, positive relationship. Several explanations may shed light on these findings.

Boys predict that they will feel less guilt and anticipate less parental disapproval for aggressive behavior (Perry, Perry, & Weiss, 1989). Furthermore, as they get older, children gain confidence in the expectation that tangible rewards will result through aggression (Perry, et al., 1989). The anticipated lack of either guilt or parental censure may underlie the finding that moral emotions do not seem to regulate the incidence of aggression in boys. With age, this is accompanied by the strengthening expectation that tangible rewards will result through aggressive behavior. The older boys may be at an age where parental socialization forces are waning in their influence. The younger boys' aggressive behavior may still be modulated by socialization pressures, and they may not share the confidence that, through aggression, their actions will be rewarded. In this way, guilt and shame still influence the incidence of aggression in younger boys, whereas, in

older boys, guilt and shame are losing their effectiveness in controlling aggression.

Another possible explanation of the positive relationships shared among guilt, shame, and empathy with aggression in older boys refers to the measures of guilt, shame and empathy used in the present study. All these measures assess aspects of a more general area of emotionality. Emotionality in boys may have a functional relationship with aggression. Other researchers have found positive relationships between empathy and aggression in boys (Feshbach & Feshbach, 1969). This relationship is hypothesized to be a function of boys' social activity level, where "..highly active children (are seen as) more empathic, helpful and aggressive." (Hoffman, 1982, p. 291). In this way, the measures show parallel positive relationships with aggression in the group of older boys, that are unlike those in the other groups of children.

Exploration of age-related differences in guilt and shame

It was predicted that with age, scores on the Guilt scale would increase and scores on the Shame scale would decrease. Neither of these hypotheses were supported. Younger and older children reported similar levels of guilt. By the age of eight, children are considered to have consolidated the necessary cognitive capacities to feel guilt (Emde et al., 1987; Graham et al., 1984; Harris, 1989; Olthof et al., 1989; Stipek, 1983). Thus, the present findings appear to support the theory that children of age eight have the capacity to experience the emotion of guilt to the same degree that older children do.

Apparent from the present results is the fact that guilt operates differently in children depending not only on their age, but also on their sex. Eight-year old children may indeed be capable of experiencing guilt, however, the function of guilt, particularly in

young boys, is quite different than it is for girls of the same age or for either older girls or boys, as described in previous sections for each age by sex group.

Older children were predicted to report lower shame scores than younger children due to the fact that, with their increased cognitive maturity, their reliance on shame would decrease. This, however, was not the case. Older children reported significantly higher shame scale scores when compared to those of younger children. This finding may be interpreted in terms of social-cognitive factors.

As previously discussed for the older children, pre-adolescent and adolescent children are quite reactive to the evaluations of others. They appear to take evaluations of their behavior "to heart", interpreting them as reflections of their worth as people. This propensity to focus on their selves, rather than on their actions is more like shame. This developmental difference in regard to levels of shame may reflect a transitory period of heightened self-awareness typical of adolescents. It may be that as adolescents pass through these turbulent years, their tendency to make shame-like attributions in response to the evaluations of others may dissipate, to include more guilt-based, and thus, other-oriented, self assessments.

Other findings

Guilt and shame. Guilt and shame were positively related across all the present samples. This finding was not surprising, for both theoretical and methodological reasons. Theoretically, guilt and shame share a number of phenomenological and cognitive features. Among other similarities, these include negative emotional valence, an evaluative stance towards some aspect of the self, and the derivation of emotion from an actual or imagined

audience. Furthermore, Tangney (1995) reports consistent positive relationships between the Guilt and Shame scales on the child and adult versions of her Test of Self-Conscious Affect. Present correlations replicate those found by Tangney (1995).

Socioeconomic status and EC scores. A significant negative correlation was found between socioeconomic status (SES) and total raw scores on the Empathy Continuum. This indicates that as SES rose, total raw scores on the Empathy Continuum decreased. It may be that higher SES is linked to a greater likelihood that both parents are employed outside the home. Empathic responsiveness in children has been linked to empathic caregiving (Kochanska, 1991). It may be that with both parents working outside the home, children's exposure to empathic caregiving is decreased, thus decreasing children's empathic responsiveness.

Administration format of the TOSCA-C. Group administration of the TOSCA-C, when compared to individual administration, influenced how children responded to items, particularly for items on the Shame scale. The group format resulted in significantly higher shame scale scores than did individual administration of the TOSCA-C. Given the need for efficiency when working with children in the schools, the group format was desirable because children could participate in the procedure with as little interruption as possible to their class time. However, the group format may have provided children with an "audience" and that this may have resulted in higher responses to items assessing shame, an emotion in which an audience theoretically plays a large role. More research needs to be done to assess the differential influence that administration format has on children's responses of the TOSCA-C.

Implications of the present study on developmental theory

In the present study, the hypothesized negative relationship between shame and empathy and the predicted positive relationship between shame and aggression were not supported in three out of the four groups of children. In fact, shame and empathy were positively related in two out of the four groups, and shame and aggression were negatively related in three out of the four groups. These findings are suggestive of a need to re-conceptualize the emphasis placed on the negative implications of shame by Tangney. As shame seems to show important adaptive functional relationships to other variables in some children, to dismiss the possibility of shame having an adaptive function seems premature.

Tangney emphasizes the negative relationships of shame with psychological and behavioral functioning (Tangney, 1991, 1995; Tangney et al., 1992a; Tangney et al., 1992b; Tangney et al., 1995). However, shame is also a necessary part of socialization and social functioning, as reviewed in the Introduction. As such, it serves a self-regulatory function "...by inhibiting arrogance, promoting humility, and fostering conformity or deference to standards of conduct valued by the group..."(Ferguson & Stegge, 1995, p. 181). It also can be viewed as a motivational component that fosters a desire for personal improvement, as shame can be viewed as a signal for discrepancies between a person's actual behavior and ideals derived from personal standards or from those of significant others (Ferguson & Stegge, 1995). From this perspective, it would appear that shame, at adaptive levels, may work to further adhere social bonds, not tear them apart, as Tangney has hypothesized.

Another factor which may need to be considered is the function of shame in normal, non-clinical children versus those children that are evidencing psychological distress. The children in the present sample represent a normative population of children. A large majority of the children reported Guilt scale totals in excess of their Shame scale totals. Shame scale totals for the present sample were similar to those reported by Tangney for similar ethnically diverse, non-clinical samples of children (Tangney, 1995). Shame scale totals derived from a normative population may not be high enough to show meaningful relationships with psychological distress. With normative children, shame may not have the same crippling emotional ramifications that shame has with those experiencing psychological distress. Adaptive shame may make people aware of their impact on others and motivate them to change troublesome aspects of their personality. Adaptive shame may also highlight the emotional distance that people are feeling from others, while also prompting them to improve.

Limitations to the present study

The main finding of the present study is the moderating effect of both age and sex on the patterns of relationships among guilt, shame, empathy and aggression. Based on the limited amount of previous research investigating these factors in middle childhood, these findings were not anticipated. The present study was limited in its ability to statistically assess relationships among the variables within age and sex groups due to small sample sizes. Regression analyses or structural equation modeling, such as LISREL, would have been appropriate statistical methods to assess the magnitude of relationships among the variables. However, due to small sample sizes, these type of analyses were not

possible. It will be important to follow up the present study with larger age and sex groups such that would allow for the application of more comprehensive statistical procedures.

The low return rate of the parental questionnaires may have also been a limitation. Only 57 percent of parents returned their questionnaires. It is possible that this group of parents represents a special group of families, characterized by their interest in and understanding of child development research. The return rate was likely most influential on the results concerning the aggression variable and this might have had an impact on the relationships that the CBCL-P data showed with the other variables in the study.

Another limitation of the present study refers to the low frequency with which parents reported aggressive behavior on the CBCL-P. This was particularly problematic for the younger age groups. Parents in the present study seemed to respond to the items of the CBCL-P with some guardedness and with some intent to portray their children in the best possible light. These parents were recruited to take part in the study; they did not seek out help for their children, as do parents in a clinical setting. Perhaps the research context prompted parents to respond to the items in a socially desirable way, despite frequent assurances of confidentiality and anonymity.

It may be useful to develop a measure of aggression that would be geared towards use with a non-clinical population. Parents may have reacted negatively to the questions that assessed more deviant behaviors (i.e., delusional, "hears voices"). The shock value of these items may have sensitized parents to their assessments of the "normality" of their children, causing them to respond in an overly positive way on other items as well.

The administration of the measures seemed to have a number of influences on children's responses. The order of the TOSCA-C and the EC seemed to have a significant impact on how children responded to items on the Shame scale of the TOSCA-C. As well, whether the TOSCA-C had been completed in a group or an individual format also appeared to influence how children responded to items on the TOSCA-C Shame scale. These influences may have had an impact on the relationship shame to the other variables in the present study. Future research using the TOSCA-C Shame scale will need to take the influence of these factors into account.

Suggestions for future research

Children's sex and age have a significant impact on the relationships between guilt, shame and other important variables in the emotional lives of young children. Based on present findings, these emotions occur in varying degrees and also show different relationships to empathic responsiveness and aggression depending on children's age and sex. The relationships among guilt, shame, empathy and aggression at various ages, for both boys and girls, require clarification. Future research needs to take these moderating variables into account when studying guilt and shame in children by incorporating different age groups and including children of both sexes.

The present study did not incorporate measures of helping behavior or of prosocial behavior, in general. These behaviors may also have important relationships with guilt and shame. Future studies could incorporate such measures of prosocial behavior to investigate the links between guilt and shame and children's positive interpersonal behaviors. In this way, the behavior-regulating functions of these emotions may be

examined more directly.

The increased importance that shame seems to play in the emotional functioning of pre-adolescent girls warrants further research. Future studies could incorporate measures which would assess other areas of emotional functioning relevant to adolescent development, such as self-esteem. As shame seems to be an important emotion in preadolescent girls, and maladaptive shame later in the lifespan seems related to psychological distress, it appears that the investigation of how guilt and shame operate in adolescence would be a relevant line of investigation.

Finally, it seems important that guilt and shame be studied in samples of children experiencing psychological distress. Both guilt and shame have been implicated in psychological disturbances. Therefore, it seems important to further investigate the relationships of guilt and shame in children who are experiencing psychological disturbances, to see how targeting their experiences of guilt and shame may be useful diagnostically and therapeutically.

The present study seems to raise more questions than it originally sought to answer. Certainly, the finding that age and sex have a moderating impact on the relationships among guilt, shame, empathy and aggression was interesting. Recent research which has taken the impact of these variables into account has focused on children's cognitive understanding of their guilt and shame experiences. The limited research available investigating the relationships of guilt and shame in middle childhood have treated this age range in an undifferentiated fashion, without looking at possible age-related differences. The present work indicates that such attention to the effect of age-

related development, on guilt and shame, may prove to be a fruitful avenue of research. In this way, the functional role of guilt and shame, emotions important in many fundamental areas of development, can be further elucidated.

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Appendix A.

SIMON FRASER UNIVERSITY

Socio-Emotional Development Lab

This hereby certifies that _____ at age _____ has participated with patience and skill in a study on how kids understand their own and other's emotions.

Sara Shepherd *Janet Strayer*

Appendix B.

Brief Descriptions and Main Emotions in Stimulus Vignettes

Old House: Three children sneak into a yard at night to investigate an old house. The stairs creak, a looming shadow appears, and the children run away.
Main emotion: fear.

Spilled Milk: Parents argue while their daughter watches TV. The father slams the door and leaves; the mother shouts at the girl to have dinner; the girl accidentally spills her milk on the floor and is slapped.
Main emotion: sadness.

Jeannie: A woman is shown talking directly to the viewer about the difficult life she and her children had on an isolated farm with an abusive husband.
Main emotion: sadness, anger.

Skates: A girl and boy argue over her new skates. The father is called in to mediate. The boy lies; the girl is unjustly punished and her skates given away to the boy.
Main emotion: sadness.

Canes: A disabled girl is shown learning to manage steps with canes, while joking about her difficulties.
Main emotion: sadness.

Circus: An elephant is shown performing for a girl and her father, and the girl is given a ride on the elephant as a treat.
Main emotion: happiness.

Appendix C.

EC INTERVIEW

Vignette One - Old House

1. Can you briefly tell me in two or three sentences what happened in this story? (If subject appears unsure as to what happened, probe for more information.)

_____

_____

_____

_____

_____

_____

2. How did you feel when watching the story?_____

a) If subject say "bad", "upset", "worried/concerned", or gives a vague reply, say **Tell me more about what you mean by _____.**

b) If the subject says "surprised" or "excited" say **Is that a good _____ or a bad _____?**

c) If the subject does not name an emotion or the response is still vague, prompt with the emotion list below. DO NOT query neutral responses (i.e., "ok", "fine").

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

3. Did you feel _____ a little or a lot?

4. What made you feel _____ (a little or a lot)?

_____

_____

_____

5. How do you think the boy in the story felt?

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

6. Did he feel _____ a little or a lot?

7. Why do you think he felt _____ (a little or a lot)?

_____

_____

_____

EC INTERVIEW

VIGNETTE TWO - SPILLED MILK

1. Can you briefly tell me in two or three sentences what happened in this story? (If subject appears unsure as to what happened, probe for more information.)

_____

_____

_____

_____

_____

_____

2. How did you feel when watching the story?_____

a) If subject say "bad", "upset", "worried/concerned", or gives a vague reply, say **Tell me more about what you mean by _____.**

b) If the subject says "surprised" or "excited" say **Is that a good _____ or a bad _____?**

c) If the subject does not name an emotion or the response is still vague, prompt with the emotion list below. DO NOT query neutral responses (i.e., "ok", "fine").

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

3. Did you feel _____ a little or a lot?

4. What made you feel _____ (a little or a lot)?

_____

_____

_____

5. In this story, how do you think the girl felt?

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

6. What made the girl feel _____ a little or a lot?

7. Why do you think she felt _____ (a little or a lot)?

_____

_____

_____

EC INTERVIEW

VIGNETTE THREE - JEANNIE

1. Can you briefly tell me in two or three sentences what happened in this story? (If subject appears unsure as to what happened, probe for more information.)

_____

_____

_____

_____

_____

_____

2. How did you feel when watching the story? _____

a) If subject say "bad", "upset", "worried/concerned", or gives a vague reply, say **Tell me more about what you mean by _____.**

b) If the subject says "surprised" or "excited" say **Is that a good _____ or a bad _____?**

c) If the subject does not name an emotion or the response is still vague, prompt with the emotion list below. DO NOT query neutral responses (i.e., "ok", "fine").

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

3. Did you feel _____ a little or a lot?

4. What made you feel _____ (a little or a lot)?

_____

_____

_____

5. How did the woman feel when she was telling her story?

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

6. Did she feel _____ a little or a lot?

7. What made her feel _____ (a little or a lot)?

_____

_____

_____

EC INTERVIEW

VIGNETTE FOUR - SKATES

1. Can you briefly tell me in two or three sentences what happened in this story? (If subject appears unsure as to what happened, probe for more information.)

_____

_____

_____

_____

_____

_____

2. How did you feel when watching the story?_____

a) If subject say "bad", "upset", "worried/concerned", or gives a vague reply, say **Tell me more about what you mean by _____.**

b) If the subject says "surprised" or "excited" say **Is that a good _____ or a bad _____?**

c) If the subject does not name an emotion or the response is still vague, prompt with the emotion list below. DO NOT query neutral responses (i.e., "ok", "fine").

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

3. Did you feel _____ a little or a lot?

4. What made you feel _____ (a little or a lot)?

_____

_____

_____

5. In this story how do you think the girl Selma felt?

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

6. Did she feel _____ a little or a lot?

7. What do you think made her feel that way?

_____

_____

_____

8. How do you think the boy Arnold felt?

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

9. Did he feel _____ a little or a lot?

10. What do you think made him feel that way?

_____

_____

_____

EC INTERVIEW

VIGNETTE FIVE - CIRCUS

1. Can you briefly tell me in two or three sentences what happened in this story? (If subject appears unsure as to what happened, probe for more information.)

_____

_____

_____

_____

_____

_____

2. How did you feel when watching the story?_____

a) If subject say "bad", "upset", "worried/concerned", or gives a vague reply, say **Tell me more about what you mean by _____.**

b) If the subject says "surprised" or "excited" say **Is that a good _____ or a bad _____?**

c) If the subject does not name an emotion or the response is still vague, prompt with the emotion list below. DO NOT query neutral responses (i.e., "ok", "fine").

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

3. Did you feel _____ a little or a lot?

4. What made you feel _____ (a little or a lot)?

_____

_____

_____

5. How do you think the girl in the story felt?

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

6. Did she feel _____ a little or a lot?

7. Why do you think she felt _____ (a little or a lot)?

_____

_____

_____

EC INTERVIEW

VIGNETTE SIX - CANES

1. Can you briefly tell me in two or three sentences what happened in this story? (If subject appears unsure as to what happened, probe for more information.)

_____

_____

_____

_____

_____

_____

2. How did you feel when watching the story?_____

a) If subject say "bad", "upset", "worried/concerned", or gives a vague reply, say **Tell me more about what you mean by _____.**

b) If the subject says "surprised" or "excited" say **Is that a good _____ or a bad _____?**

c) If the subject does not name an emotion or the response is still vague, prompt with the emotion list below. DO NOT query neutral responses (i.e., "ok", "fine").

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

3. Did you feel _____ a little or a lot?

4. What made you feel _____ (a little or a lot)?

_____

_____

_____

5. How did the girl feel when she was telling her story?

HAPPY
SURPRISED
ANGRY
AFRAID
SAD
DISGUSTED
NOTHING

6. Did she feel _____ a little or a lot?

7. Why do you think she felt _____ (a little or a lot)?

_____

_____

_____

Appendix D.

SIMON FRASER UNIVERSITY

Informed Consent for Minors by Parent or Guardian to participate in a research project.

The university and the people conducting this research project subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort and safety of participants. This form and the information it contains are given to you for your full understanding of the procedures involving you and your child.

Your child will be asked to watch a number of video clips, and then asked about his or her reactions to them. This activity has been used in previous research projects with children and they found it both interesting and engaging. Your child will also be asked fill out a questionnaire which asks him or her to think about common social situations and how he or she would react if they were involved in them. You will be asked to fill out several questionnaires which ask you to think about your child's behavior and the nature of your everyday interactions with your child. When the questionnaires are complete, you will be asked to return them, in an enclosed, addressed and stamped envelope.

Both you and your child will be identified only by number so as to ensure your confidentiality and anonymity, and all records will be securely stored. Your participation in this study is **absolutely voluntary**, as is your child's, and should either of you wish to withdraw your involvement in this project, you may do so **at any time**.

Your signature below indicates that you understand the procedures of this research project, and that you voluntarily agree to participate and to allow your child to participate in the project.

As _____(parent/guardian), I consent to _____ (name of child), taking part in the procedures specified in this consent form which will be carried by Sara Shepherd and supervised by Dr. Janet Strayer.

I understand the procedures to be used and have fully explained them to _____ (name of child). In particular, my child knows that he or she can withdraw from the project at any time. Any complaint about the experiment may be brought to the chief researcher named above or to Dr. C. Webster, Chair, Psychology Department, Simon Fraser University.

SIGNATURE:_____

WITNESS:_____

DATE:_____