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ORIGINAL ARTICLE

Family Communication Patterns, Sympathy, Perspective-Taking, and Girls' Thoughts About Interpersonal Violence

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Abstract This self report online study explored the process of moral reasoning about interpersonal violence by considering the roles of family communication patterns, mediated by sympathy and perspective-taking (PT) in girls ages 6–16 (N=253). Using structural equation modeling, findings suggest that families where conversation communication plays a central role nurture abilities to sympathize and PT. Further, younger girls tend to be driven by sympathy, which shifts to PT as they age. These abilities positively correlate with thoughts about interpersonal violence as wrong whether "justified" and independent of severity. Error correlations infer that, at some level, "justified" violence is acceptable and, to a lesser degree, the severity of the violence plays a role in moral reasoning about violence, thus suggesting complex thought.

Keywords Family communication patterns · Sympathy · Perspective-taking · Moral reasoning · Interpersonal violence

The family unit is an important influence on individual development, how children learn to communicate, and behavior with others. The family experience can affect an individual's abilities to feel compassion and to understand what others experience (Bowlby 1982; Jagers et al. 2007). Research has found links among a person's abilities to understand and feel for others, and our mental and social well-being (Britton and Fuendeling 2005; Ensor et al. 2011). For instance, Skoe (2010) found "Not only did individuals who demonstrated more integrated care reasoning also show greater tendencies to see the world from others' points of view, they showed lower levels of anxiety and uneasiness in reaction to other people's distress" (p. 201).

Deficits in these attributes can lead to antisocial behaviors including violence (Cohen and Strayer 1996; Jolliffe and Farrington 2007; Sams and Truscott 2004). The importance ascribed to the interrelatedness of these constructs extends to our moral reasoning about violence (Hoffman 2000). A family that encourages open discussion and considers different perspectives may engage in multi-perspective and complex moral reasoning about violence and related behaviors (Eisenberg et al. 2006; Laible et al. 2008). For example, Laible and colleagues found that power assertive parenting was associated with less moral emotional development, such as experiencing empathy and guilt. On the other hand, children exposed to more conversational-oriented parenting were associated with greater empathy abilities and higher levels of moral emotional development. Thus, the importance of this process and its effects cannot be overstated.

Despite the critical role of these factors, there has been little published research that links these variables to moral reasoning about interpersonal violence learning incorporating family communication patterns (FCPs) and the abilities to sympathize and perspective-take (PT) (Carlo 2006; Eisenberg 2002; Eisenberg et al. 2005; Farrant et al. 2012; Hughes and Dunn 1998; Jagers et al. 2007). In particular, research on girls that examines the relationships among kinds of FCPs as they relate to family type, abilities to sympathy and PT, and their moral assessments about interpersonal violence is dearth (Herrman and Silverstein 2012; Massetti et al. 2011). Although findings have been problematic, owing to revisions in definitions of crimes, policy shifts, and law enforcement changes (Brown et al. 2007; Goodkind et al. 2009; Zahn et al. 2008), some reported recent trends in girls' violent behaviors as cause for concern (Smith and Thomas 2000) that warrants further

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exploration. Girls' violent behaviors tend to occur in an interpersonal setting involving family members or peers (Kroneman et al. 2009; Maas et al. 2008; Massetti et al. 2011), and thus, may be underreported in order to avoid the public spotlight and the associated stigma (Zahn et al. 2008).

Research by Calvete and Orue (2013) suggests that parenting and family interaction can have a greater influence on girls' violent behaviors compared to boys' because of girls' greater focus on interpersonal relations (Brown et al. 2007; Weiler 1999). The study found that increased family violence was associated with increased child violent behaviors; this relationship was stronger for girls than boys. Zahn et al. (2008) found that among girls, assaulting family members was second to aggression toward peers. For boys, most aggression occurred outside of the home. These and similar findings make a strong case for research that examines girls in the context of family communication.

Furthermore, this study focuses on girls ages 6-16, a developmental period where girls move from concrete to more abstract thought (Piaget 1965). They also begin to experience heightened conflicts with parents. As we might expect, this is a time when understanding the more abstract perspective of others can facilitate experiences that nurture personal growth, enhance social skills, increase emotional intelligence, and foster healthy personal relationships (Batanova and Loukas 2012; Roeser et al. 2000).

This paper begins with a theoretical framework that makes the case for the relationships among family communication, abilities to sympathize and empathize in girls, and how these variables might predict assessments about interpersonal violence. Next, the hypotheses and research questions are tested using measure and structural equation modeling. The results are then discussed.

Literature Review

Affective and Cognitive Knowledge Structures

The family environment provides opportunities for observing, learning, and modeling of parental behaviors (Bandura 1991), which can endure past adolescence and carry forth into adulthood, passing from one generation to the next (Carroll 1977; Ellis and Petersen 1992; Masten 2006). This process thus forms and influences knowledge structures, which guide thoughts, feelings, and behaviors (Koerner and Fitzpatrick 2002a, b).

One theoretical framework that can be used to explain this type of learning is the General Learning Model[1] (GLM; Barlett and Anderson 2010; Buckley and Anderson 2006), which is based on social-cognitive learning theory. Learning occurs at the cognitive, affective, and arousal levels. According to the GLM, individuals learn through observation and through direct experience or modeling of behaviors (Bandura 2002) especially over repeated exposures (Barlett and Anderson 2010). Through family interaction, children observe whether their behaviors are rewarded or punished. Rewarded behavior motivates children to continue the action and develop positive attitudes toward the behaviors, which then become valued. These behaviors can be activated without much thought and can be affectively or cognitively based.

There is no consensus on the precise definitions of sympathy and PT (Eisenberg et al. 2001; Zhou et al. 2003). *Affective* sympathy (aka empathetic concern) is defined as feeling sorrow for another person or situation (Clark 1987; Ruusuvuori 2005). Perspective taking (aka *cognitive* empathy) is the ability to place oneself in the situation of another person and understand the thoughts and feelings of that individual (Batanova and Loukas 2012; Eisenberg 2002). Perspective taking can apply to more abstract societal views, such as social equality and justice so that circumstances may be viewed from these perspectives, as well (Eisenberg et al. 2001; Sakamoto 1994).[2] For example, state sanctioned forms of violence may be accepted for the greater good of society (e. g., capital punishment, military action). In short, sympathy is affective and perspective-taking is cognitive.

Age, Moral Reasoning About Interpersonal Violence, and Cognitive and Affective Routes

Moral reasoning is the ability to understand, make, and explain ethical choices (Eisenberg 1986). It emerges from an individual's internal construction of the social world based on experience and personal values (Reed 1997). Kohlberg (1984) posited that moral reasoning is primarily a cognitive process consisting of logical reasoning commensurate with one's developmental stage and experiences. Eisenberg and Morris (2001) suggest that moral reasoning has an affective component, which involves compassion or less deliberative affective sympathy for parties in a situation that evokes morality and which may dominate less developed cognitive processes such as PT. In cognitively mature persons, research suggests a relationship between cognitive PT and more complex affective sympathy toward others (Batson 1991). This may indicate that greater PT results in complex or perhaps more involved sympathy toward a victim, for example.

[1] The role of nature is acknowledged but beyond the score of this study.

[2] For a review of competing conceptualizations of sympathy, PT, and empathy see: Eisenberg et al. (2001); Galinsky et al. (2011); Kohlberg (1969, 1986), and Okun et al. (2000); and Skoe (2010).For a review of competing conceptualizations of sympathy, PT, and empathy see: Eisenberg et al. (2001); Galinsky et al. (2011); Kohlberg (1969, 1986), and Okun et al. (2000); and Skoe (2010).

Interpersonal violence is physical aggression from one person directed at another person for the intention of causing harm (Vieira 2012, 2013). Individuals may view some instances of violence as warranted or justified based on societal or personal norms (Calvete 2008; Henry et al. 2000; Huesmann and Guerra 1997; Keiley et al. 2000; Su et al. 2010). Justified violence may be particularly salient in interpersonal contexts where most girls' violence occurs and where there is a wider range of interpretation as to what constitutes appropriate aggressive behaviors.

Additionally, research on children's reasoning about violence has found that children ages 7-15 age range start distinguishing between "justified" and "unjustified" violence, with older individuals demonstrating greater differentiation (Krcmar and Valkenburg 1999; Vieira and Krcmar 2011). They can evaluate whether a violent act may be deemed "legitimate" or "right" predicated upon their understanding the situation and imagining what the situational characters are experiencing. In fact, Krcmar and Vieira (2005; Vieira and Krcmar 2011) found that lower levels of PT abilities were associated with assessments about unjustified acts of interpersonal violence being less wrong. Additionally, the severity of the violent act may moderate the moral assessment. Vieira (2012) found that regardless of the justified/unjustified designation, the more severe violent act involving hospitalization of the victim was perceived as more wrong than the less severe case. Therefore, the ability to imagine the point of view of another and feel affective sympathy for that person can influence a person's moral reasoning about certain kinds of violence through a complex process of understanding and assessment.

Age, Sympathy, and PT

Research indicates that both sympathy and PT have a positive relationship (Eisenberg et al. 2001; Galinsky et al. 2011). Placing oneself in another's position would likely allow a person to feel sorrow (sympathy) for that person. This positioning results in complex moral reasoning so that in addition to considering the thoughts and feelings of the victim of interpersonal violence, a person might also consider motives and context, as well. Because of this process, the individual may develop more deliberative and nuanced sympathy for the victim perhaps involving a deeper understanding of the situation. Generally, this ability grows as a person becomes older, garners more experiences, and develops more complex knowledge structures. However, in children, PT reasoning is relatively primitive, and affective processes, such as less deliberative and more spontaneous sympathy, may dominate reasoning processes (Eisenberg et al. 2001). Therefore, a young child may have limited PT and thus be primarily guided by affective sympathy (Buck 1984; Kohlberg 1984).

Family Communication Patterns and Family Type

FCPs offer an approach to examine family discourse and to study the mechanism, which fosters the teaching and learning of attitudes, beliefs, and values within families (Fitzpatrick and Ritchie 1994; Krcmar 1996; McLeod and Chaffee 1972; Meadowcroft 1986; Ritchie 1991). The FCP framework consists of two types of family communication: conversation-oriented and conformity-oriented (Koerner and Fitzpatrick 2002b).

Conversation-oriented families are actively and spontaneously engaged in family dialogue and mutual decision-making (Krcmar 1996, 1998; Meadowcroft 1986). Intrafamily open interaction is valued and ideas are shared with family members. This type of family communication fosters the abilities to PT and to sympathize for others.

Conformity communication is viewed as the degree to which a person perceives his or her parents, or primary caregivers, as having power and control in the family. Decision-making rests with the primary caregiver. Parental or child communication serves to foster conformity to family rules, values, and beliefs (Koerner and Fitzpatrick 2002b). Families low in conformity communication believe in less family cohesion and less hierarchically structured families. This family environment encourages the repression of shared feelings and sympathy for those with contrary perspectives. Consideration of perspectives is limited to those advocated by parents.

A high level of one type of communication does not necessarily equate with a low level of the other communication style; thus, there are four conditions accounting for low and high combinations of these two communication types. For example, a family may be high or low in conformity communication and conversation communication or high in one type and low in the other type. The crossing of the two types of communication can help us discover meaningful more complex family relationships (Koerner and Fitzpatrick 2002a, b; Sillars et al. 2005). This interaction may be conceptualized along the lines of pluralistic, protective, consensual, and laissez-faire families (Fitzpatrick and Koerner 1997; Koerner and Fitzpatrick 2002a, b; McLeod and Chaffee 1972; Ritchie 1991).

A family high in conversation communication and low in conformity communication is *pluralistic*. This family type offers opportunities for the child to express thoughts, feelings, and independence. Parents do not feel the need to control their children or make decisions for them. There is little conflict avoidance and decisions are made by everyone in the family, which facilitates confidence in children. Thus, since the children are autonomous, they are allowed to explore new ideas. It follows that pluralistic families would allow for the development of children who are sympathetic and receptive to the perspectives of others.

Inversely, the *protective* family possesses high conformity communication and low conversation communication. There

is a lack of openness and an emphasis on obedience to parental authority. Communication focuses on compliance to family rules, values, and beliefs (i. e., there is a "right" perspective). Parents make the decisions and open conflict is avoided. Children distrust their own decision-making abilities because they have little decision-making experience. Perspectives and sympathy are limited to the extent that they are consistent with parental authority and values.

Consensual families are high on both dimensions. These families have rules and established values and beliefs; however, parents decide and explain their decisions to their children, who are allowed to provide feedback. This family type creates tension between the pressure to agree and preserve the existing family structure and a desire for open communication and the sharing of new ideas. Consensual families might encourage sympathy for others and open discussion; however, in practice, the perspectives, views, and behaviors supported by parents are expected to be followed.

Last, laissez-faire families have little communication and there is lack of parental interest in their children. Children, who do make decisions, doubt their decision-making ability because it is not valued by parents. Laissez-faire family members are emotionally withdrawn from each other. Whether these children develop abilities to sympathize or PT is contingent upon their experiences with external others. In sum, family type can affect whether children become sensitive to others through the development of their abilities to PT and sympathize.

Further, the ability to imagine the point of view of another is potentially influenced by other factors. For instance, those individuals who learn that there are often broader consequences for the victim from violent acts are likely to demonstrate better PT when attempting to understand such behavior (Stewart and Marvin 1984). However, when affective responses, such as sympathy, are dampened, it is probable that less sympathy for the victim would lead children to see violence as less harmful, less problematic, and perhaps acceptable under certain conditions. Additionally, in families where diverse PT is restricted (perhaps through strong compliance practices) and sympathy limited to those restricted perspectives, the lack of PT and sympathy abilities may be compensated for by a strict dichotomous schema of right or wrong. This is characteristic of the conditioning that can occur in protective, and perhaps consensual, families thus creating a heuristic for assessing violent acts. Likewise, underdeveloped PT and sympathy abilities may attenuate views of violence as wrong if not accompanied by a strong sense of right or wrong. Thus, in both cases, it is possible that PT and sympathy may not significantly mediate the relationship between family communication and moral reasoning about interpersonal violence.

In summary, there are a number of important considerations that might influence girls' moral reasoning about interpersonal violence. There is the role of interpersonal relationships in influencing PT and sympathy abilities during ages 6-16, a developmental period when individuals move from concrete to abstract thought associated with PT. More specifically, the nature and content of family communication define the family type. How parents/primary caregivers interact with their children can impact the development of PT and sympathy abilities, which are necessary to understand the interpersonal dynamics and consequences of violence. Moreover, whether the violence is perceived as legitimate and the degree of physical harm exacted may play roles in assessing the violent act.

Therefore, with the above discussion in mind, the following will be investigated,

H1: Girls' age will moderate a) PT and b) sympathy abilities.
H2: Girls' reports of conversation family communication, which is the primary FCP in pluralistic families, will have a positive relationship with their abilities to a) PT and b) sympathize.
H3: Girls' reports of conformity family communication, which is the primary FCP in protective families, will have a negative relationship with their ability to a) PT and b) sympathize.
H4: Consensual families, or girls' reports of both more conversation and conformity types of communication, will be positively associated with a) PT and b) sympathy abilities.
H5: Sympathy and PT will positively relate to each other.
H6: Girls' abilities to a) PT and b) sympathize will positively relate to violent acts being assessed wrong.
RQ1: What will be the relationship between the laissez-faire families (low in both communication types) and girls' abilities to a) PT and b) sympathize?
RQ2: Will girls' a) PT and b) sympathy mediate the relationship between family type and moral reasoning about interpersonal violence?
RQ3: Will girls assess more harmful violence differently from relatively less harmful violent acts?

Figure 1 depicts the hypotheses and research questions.

Method

Sample and Procedures

The sample consisted of 253 girls ages 6–16 primarily from the United States (n=177, 70%), United Kingdom (n=21, 8%), Canada (n=17, 7%), Australia (n=15, 6%), Ireland (n=9, 4%), and Other (n=14, 5%). The mean age was 11.34 years (SD=1.98) and median was 11.00. Skewness was 0.09 and Kurtosis was −0.27, both well within the -1 to 1 range. These measures indicate normal age distribution.

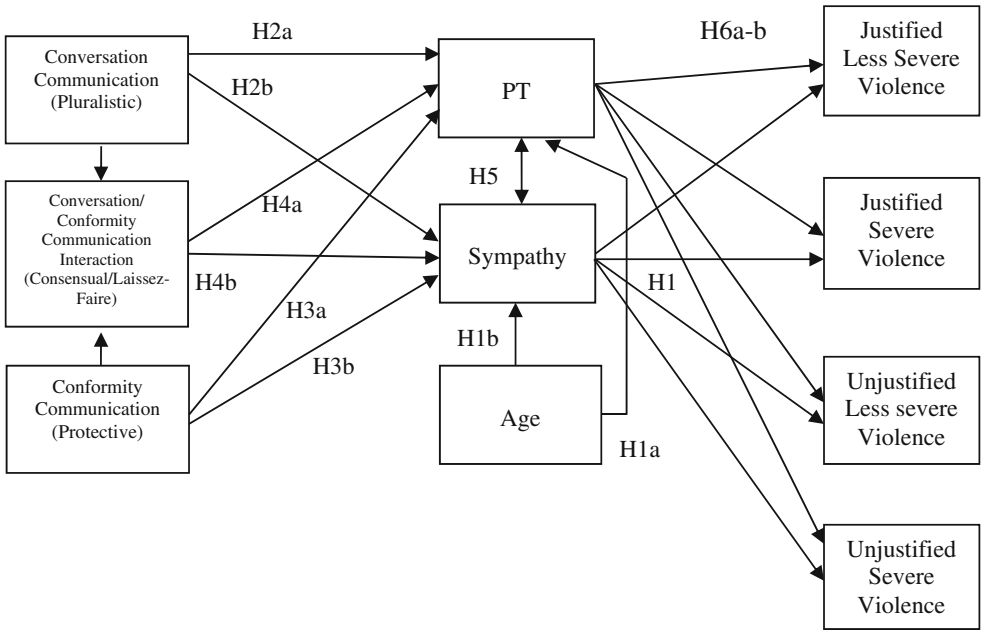

Fig. 1 Hypothesized SEM for the Relationships Among FCPs, Sympathy, PT, and Thoughts About Interpersonal Violence. Note: N=253

The girls were recruited to complete an online survey via email invitation over a 4-week period. After the initial email invitation was sent to 2500 girls' primary caregivers, two subsequent reminder emails were sent at one-week intervals. These individuals were members of an online children's game website. The owner of the site agreed to invite a random number of members to participate in the study. The response rate was 10%. Recruitment and all data collection procedures were IRB compliant. That is, primary caregivers completed an online consent form and children were also asked to provide online assent. Once these forms were completed, the participants were directed to a secure website where they had the opportunity to complete the survey with the option of stopping anytime. In addition to questions requesting respondents' age, gender, and residence, the 50-item survey included scale and open-ended short answer questions.

Measures

Family Communication Patterns The children's version of the Revised Family Communication Pattern instrument consists of 15 conversation-orientation items and 11 conformity-oriented items, all anchored in a 7-point scale ranging from 1 (Not at all) to 7 (Very much) (Koerner and Fitzpatrick 2002b). Past reliabilities for conversation communication were 0.84–0.92 and for conformity communication were 0.73–0.87 (Fitzpatrick and Ritchie 1994; Koerner and Fitzpatrick 2002b). Sample items are conversation communication: "I usually tell my parents what I am thinking about" and conformity communication: "In my home, my parents usually have the last word." Table 1 contains the factor structure.

Sympathy Sympathy was operationalized by a six item *affective* instrument used in similar research (Vieira and Krcmar 2011; Vieira 2012). Items were anchored in a five point scale ranging: 1 (Strongly disagree), 2 (Disagree), 3 (In the middle), 4 (Agree), and 5 (Strongly agree). Reported reliability was 0.78. A sample item is: "Seeing someone else cry makes me feel sad." The factor loadings are in Table 2.

PT Five hypothetical *cognitive* PT scenarios were adopted from Krcmar and Valkenburg (1999) requiring short open-ended responses and intercoder-reliability assessment. Children were asked 11 open-ended questions or two questions per scenario (one scenario had 3 questions). A sample scenario is "You're at school and a bee lands on your friend, so you try to swat the bee away. Just then, your teacher turns around and sees you hitting your friend. The teacher is too far away to see the bee. a) What do you think? b) What does your teacher think?" Cronbach Alphas ranged from 0.72 to 0.92 (Krcmar and Vieira 2005; Vieira and Krcmar 2011: Vieira 2012). See Table 2.

Moral Reasoning About Justified and Unjustified Interpersonal Violence The Moral Interpretation of Interpersonal Violence (MIIV) scale (Krcmar and Valkenburg 1999) was used to measure the assessment of interpersonal violence. Children read and responded to four stories, which were single item measures (Krcmar and Vieira 2005; Vieira and Krcmar 2011; Vieira 2012).

Table 1 CFA of Family Communication Patterns

Items	Conversation communication	Conformity communication
1. My parents often say something like "Every member of the family should have some say in family decisions."	0.56	
2. My parents often ask my opinion when the family is talking about something.	0.68	
3. My parents encourage me to challenge their ideas and beliefs.	0.53	
4. My parents often say something like "You should always look at both sides of an issue."	0.57	
5. I usually tell my parents what I am thinking about.	0.65	
6. I can tell my parents almost anything.	0.55	
7. In our family, we often talk about our feelings and emotions.	0.71	
8. My parents and I often have long, relaxed conversations about nothing in particular.	0.68	
9. I really enjoy talking with my parents, even if we disagree.	0.63	
10. My parents like to hear my opinions, even when they don't agree with me.	0.68	
11. My parents encourage me to express my feelings.	0.64	
12. My parents tend to be very open about their emotions.	0.66	
13. We often talk as a family about things we have done during the day.	0.65	
14. In our family, we often talk about our plans and hopes for the future.	0.67	
15. My parents often say something like "My ideas are right and you should not question them."		0.76
16. My parents often say something like "A child should not argue with adults."		0.74
17. My parents often say something like "There are some things that just shouldn't be talked about."		0.74
18. My parents often say something like "You should give in and not argue rather than risk making people mad."		0.67
19. When anything really important is involved, my parents expect me to obey without question.		0.50
20. In our home, my parents usually have the last word.		0.45
21. My parents feel that it is important to be the boss.		0.60
22. My parents sometimes become irritated with my views if they are different from theirs.		0.58
23. If my parents don't approve of something, they don't want to know about it.		0.57
Chi Square	211.72	
Degrees of Freedom	184	
p-value	0.08	
Root mean Square Error	0.05	
Root Mean Square Error Approximate	0.02	
Comparative Fit Index	0.99	
Cronbach's Alpha	0.91	0.87

Note: Maximum Likelihood Estimation was used. All items used a 5-point scale ranging from 1 (Low) to 5 (High). The reported factor loadings were used to construct the composite variables for both variables and were the basis of the Cronbach alphas. N=253

In each story, a scenario described how the main character used violence to address a problem. Two stories were intended to show unjustified interpersonal violence and the other two involved justified interpersonal violence where violence was used to protect a person or as restitution for harm done. In each set of justified and unjustified violence scenarios, one situation incorporated relatively minor violence; whereas, the other situation involved hospitalization of the victim. The respondents answered 5-point scale questions concerning whether the violence was wrong or right. The anchor was 5 (Was very wrong), 4 (Somewhat wrong), 3 (In the middle), 2 (Somewhat right), 1 (Very right). One scenario was as follows. "Paul is walking home with his sister. A man grabs her purse, pushes her down, and runs away. Paul chases the man to get the purse back. When he gets hold of the thief, he kicks him several times and grabs the purse. Was Paul: …"

Table 2 CFA of PT and Sympathy

Items	Perspective-Taking	Sympathy
1. Visiting grandmother after school and not doing homework due the next day:		
What do you think?	0.48	
What does your teacher think?	0.44	
What do your parents think?	0.43	
2. Letting your friend borrow your new bike:		
What do you think?	0.49	
What does your friend think?	0.63	
3. A bee attacks your friend and you swat it away appearing like you hit your friend and your teacher see it:		
What do you think?	0.44	
What does your teacher think?	0.43	
4. Your friend Jamie and you both play soccer, but for different teams. When your team plays Jamie's team, your team wins.		
What do you think?	0.42	
What does your friend Jamie think?	0.53	
5. It makes me sad to see someone alone in a group.		0.63
6. Seeing someone else cry makes me sad.		0.81
7. I get upset when I see someone else get hurt.		0.75
8. If my close friends are happy, then I am happy.		0.44
9. Seeing someone else laugh a lot makes me laugh a lot.		0.50
Chi Square	13.35	0.73
Degrees of Freedom	22	3
p-value	0.92	0.87
Root mean Square Error	0.03	0.01
Root Mean Square Error Approximate	0.00	0.00
Comparative Fit Index	0.99	0.99
Cronbach's Alpha	0.78	0.74

Note: Maximum Likelihood Estimation was used. All items used a 5-point scale ranging from 1 (Low) to 5 (High). The reported factor loadings were used to construct the composite variables for both variables and were the basis of the Cronbach alphas. N=253

Analysis

An analysis of variance revealed no significant nested data effects by country. The hypotheses and research questions were tested using structural equation modeling (SEM) more specifically SPSS 19.0 and Analysis of Moment Structures (AMOcS) 19 software applications. The primary analyses were confirmatory factor analysis (CFA) and SEM followed by a conversation and conformity communication variables' median split-based analysis of variance (ANOVA), which will shed light on the interaction of both types of communication (Koerner and Fitzpatrick 2002b). The interaction variable is the cross-product of the two communication types.

Measurement Model

Two coders were trained and rated the 11 open-ended PT items, which were based on 0 (no response) to 3 (full cognitive PT). The Cohen Kappa per item as a measure of intercoder reliability was assessed from 0.80 to 0.90.

The FCPs, PT, and sympathy items were confirmatory factor analyzed using maximum likelihood estimation. Of the conversation communication items, one was dropped owing to a low factor loading. The loadings after removing the item were 0.53–71 and reliability was 0.91. Two of the conformity communication items were dropped. Subsequent loadings were 0.45–0.76 and reliability was 0.87. The fit indices were χ^2=211.72, df=184, p=.07, CFI=.99, Root Mean Square Error (RMSE)=.04; Root Mean Square Error Approximate (RMSEA)=.02. Index scores of>0.90 are acceptable. RMSE scores of<0.10 and RMSEA scores of<0.05 are desirable (Kline 2011). Table 1 represents the factor structure.

Two PT items were dropped because of low loadings. In the subsequent CFA without the two items, the loadings were 0.43-0.63, which demonstrated desirable convergent validity. Reliability was 0.74. The fit indices were χ^2=13.35, df=22, p=.92, CFI=.99, RMSE<0.00; RMSEA=.02. One sympathy

item was dropped because of its low loading. The CFA loadings were 0.44–0.81 and reliability was 0.78. The fit indices were χ^2=.73, *df*=3, *p*=.87, CFI=.99, RMSE<0.01; RMSEA<0.001. Table 2 depicts the factor structures. The FCP, sympathy, and PT latent variables were constructed based on the factor loadings employing a simple average of items per construct.

Next, the MIIV instrument were single item measures with the following properties: Less severe justified violence (*M*=2.89, *SD*=1.20), severe justified (*M*=3.72, *SD*=1.08), less severe unjustified (*M*=4.90, *SD*=.40), severe unjustified (*M*=4.94, *SD*=.36). Paired comparisons were made. Other than the comparison of less severe unjustified violence and severe unjustified violence (*p*=.16), all of the pairs were significantly different at *p*<.001. The non-significant finding suggests that the unjustified cases were deemed wrong by participants no matter what the severity of the violence. Last, zero-order correlations of all study variables ranged from 0.01 to 0.77, which demonstrated desirable discriminant validity.

Structural Model

First, to minimize collinearity and to keep the continuous interaction term from destabilizing the estimates of the main effects, a centered-interaction term was used to represent conversation and conformity types of family communication (Cohen et al. 2003). This was done by subtracting the score on conversation and conformity communication types from the grand mean for conversation and conformity communication respectively across the entire sample. Next, the cross-products of the communication types were constructed from the subtracted differences, which then became the centered interaction term.

The hypotheses were examined through SEM. The hypothesized model did not fit the data well (χ^2=152.75; *df*=33, *p*<.001; RMSE=.09, RMSEA=.12; and CFI=.41. Based on modification indexes that demonstrated face validity, a respecified model was developed which fit the data well (χ^2=33.33; *df*=29, *p*=.27; RMSE=.04, RMSEA=.02; and CFI=.98. The analyses are based on this model. See Fig. 2.

As an aid to interpreting the interaction term, the means of sympathy and PT by low and high levels of conversation communication and conformity communication were tabulated based on a median split of each communication type. From these data, mean scores for sympathy by each family type were calculated using cross-products: laissez-faire, *M*=17.13; consensual, *M*=19.09; protective, *M*=17.17; and pluralistic, *M*=19.04. The means for PT were: laissez-faire, *M*=3.98; consensual, *M*=4.06; protective, *M*=3.84; and pluralistic, *M*=4.20.

Results

H1: Participant age moderated sympathy (β=-0.12, *p*=.03) and PT (β=.14, *p*=.03) abilities. Although there were small effects, older children were less sympathetic but demonstrated more PT.
H2: Pluralistic families were positively related to ability to sympathize (β=.35, *p*<.001) and to a lesser degree related to PT (β=.14, *p*=.04).
H3: Protective families did not demonstrate a relationship with ability to sympathize; however, a small negative relationship was found with PT (β= −0.10, *p*=.05).
H4: Consensual families were positively associated with sympathy (β=.12, *p*<.001).
H5: No correlation was found between PT and sympathy.
H6: The ability to PT was positively related to instances of violence as being wrong: unjustified less severe violence (β=.23, *p*<.001), justified less severe violence (β=.12, *p*=.04), unjustified severe violence (β=.21, *p*<.001), and justified severe violence (β=.22, *p*<.01).
RQ1: Laissez-faire families were not related to PT or sympathy.

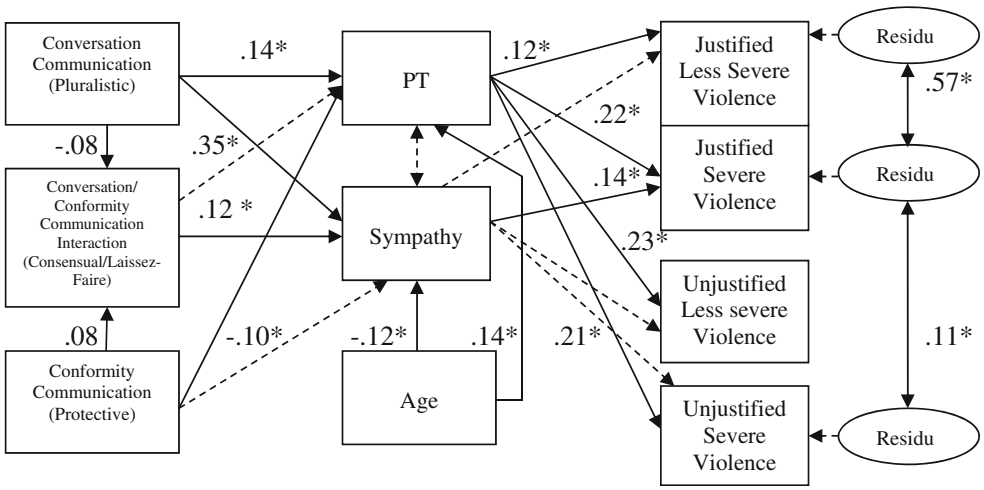

Fig. 2 Respecified SEM for the Relationships Among FCPs, Sympathy, PT, and Thoughts About Interpersonal Violence. Note: *path coefficients are *p*<.05. Dashed lines represent removed paths. Maximum Likelihood Estimation was used. χ^2=33.33; *df*=29, *p*=.27; RMSE=.04, RMSEA=.02; and CFI=.98. *N*=253

RQ2: The Sobel test revealed two significant mediated relationships involving the severe unjustified violent condition. PT mediated the relationship between pluralistic families and severe unjustified violence ($p<.001$, $t=3.16$, $SE=.01$) and between protective families and severe unjustified violence ($p<.001$, $t=2.83$, $SE=.01$). A significant positive path to justified severe interpersonal violence was the only link with sympathy ($\beta=.14$, $p<.01$).
RQ3: Only the less severe justified interpersonal violence case was perceived as not as wrong as the other cases ($p<.001$).

Last, two significant error correlations were found. They were justified severe violence and justified less severe violence ($r=.57$, $p<.001$), and justified severe violence and unjustified severe violence ($r=.11$, $p=.03$).

Discussion

This study examined the relationship among family types (based on communication patterns) and moral reasoning about interpersonal violence in girls, ages 6-16, mediated by the abilities to sympathize and PT. Results suggest that pluralistic, consensual, or those families high in conversation communication foster sympathy and PT abilities consistent with the GLM affective and cognitive routes to learning (Barlett and Anderson 2010; Buckley and Anderson 2006). A pluralistic parenting style appeared to directly foster greater perspective-taking and sympathy; whereas, communication in a consensual family encouraged sympathy alone. This suggests that although consensual parents encourage two-way communication, their decision-making is not shared with children but left primary to adults. Thus, children are guided by parental thought processes and decision-making, where perhaps children's assessments and conclusions are based on emotional factors such as sympathy. On the other hand, protective parenting styles are not conducive to perspective-taking/empathy and sympathy. This was expected since these families are rule compliance driven and discouraged from questioning the rules or enforcement of the rules.

Although sympathy was positively related to justified severe violence, PT was associated with all forms of violence as wrong, and the less severe justified case as being less wrong compared to the others. Jolliffe and Farrington (2007) discovered that less severe cases of offenses were not necessarily related to lower "cognitive empathy" but possibly context. Perhaps that although perceived as wrong, the justified *and* less severe conditions interacted and mitigated the wrongness of the act. Younger children tended to have more sympathy compared to older children who used more PT ability, which is consistent with the literature and Kohlberg's developmental conceptualization about moral reasoning (1969, 1984, & 1986).

Additionally, there was a positive path from PT and sympathy to the severe justified case where the grandmother was robbed. Perhaps the contextual element of "an endearing grandmother" being the victim might be why sympathy drove this scenario (Yeo et al. 2011; Sams and Truscott 2004). Additionally, the severe violent response could have prompted PT including thoughts of the consequences of such a serious act. In any case, context may play a moderating role.

There was also a strong correlation between the two justified violence error terms, which suggests the presence of a heuristic suggesting that, no matter what the context, violence is always wrong, and as noted above, context may moderate the relationship. The means of the four conditions also suggest these relationships. However, this finding also implies that the justified cases may allow for a wider range of interpretations and assessments of acts of violence beyond a "wrong" or "right response" (Calvete 2008; Su et al. 2010). Additionally, the small error correlation between both cases of severe violence may account for the hospitalization of the perpetrator, an action that may have been viewed as extreme but not precluding that a response was in order nonetheless (Hartmann et al. 2010).

There were two significant mediated relationships occurring among pluralistic and protective families mediated by PT to severe unjustified violence, which was the most salient condition: severe and unjustified and consist with findings by Vieira (2012). It may be that the severity of the violent act prompted greater information processing involvement through PT with a focus on perhaps serious victim injury and the consequences of severe violence on both parties. The severity may have interacted with the unjustified aspect of this condition because it was the harshest scenario among the four presented. It might also be that pluralistic children focused on empathy for the victim while the protective children focused on breaking the law and the consequences of such acts.

There was no correlation between PT and sympathy. Each variable appeared to operate independently of the other. Age's direct paths to sympathy and PT may explain this finding. The path coefficient from age to sympathy was negative and small, but significant ($\beta=-0.12$, $p<.05$) and age to PT was positive and small ($\beta=.14$, $p<.05$). Consistent with previous research (Buck 1984; Eisenberg and Morris 2001; Eisenberg et al. 2001; Kohlberg 1969, 1984, 1986), younger children are primarily driven by emotional processing, and, as they develop cognitive abilities, more perspective-taking occurs. Thus, under these conditions, the mediating effect of sympathy on age and PT is mitigated.

Last, the study response rate was 10%. The recruitment effort was conducted by a video game company. There were a number of less than optimal recruitment conditions. First, recruitment occurred during July in the Northern Hemisphere; thus, recruitment competed with various outdoor activities for children's attention. Second, email invitations were not

personalized; personalized invitations tend to have higher response rates (Porter 2004). Third, after the initial invitation, two follow-up emails were sent (Porter 2004); additional follow-ups may have increased the response rate. Fourth, no effort was made to invite only active gamers, thus focusing on those girls who were more engaged with the recruitment organization. Inactive gamers would not be as responsive as involved ones. Fifth, invitees were not pre-notified of the study. Creating a buzz around the study might have increased the likelihood of participation. Last, there were no participation incentives. Notwithstanding the response rate, for this type of analysis, the sample count is more critical. More specifically, the required sample size for this study's specified structural equation model is≥200 (Kline 2011). The sample was 253.

Practical Implications

Without understanding and considering the perspectives of others, it is difficult to have enriching interpersonal relationships. In a nurturing, open communication or pluralistic family, where dialogue includes different viewpoints emphasizing feelings and thoughts, well-rounded girls can develop into adults who understand others and the environments surrounding them. Such abilities aid in how we interact with others, thus making the avoidance of physical aggression possible, and, at the same time, fostering cooperation (Cohen and Strayer 1996; Jagers et al. 2007). Encouraging greater sensitivity to others can be integrated into the family, school, and social aspects of children's lives (Jagers et al. 2007).

Consistent with this research's findings, the following practices can facilitate the development of empathy, sympathy, and moral reasoning. First, induction (Berkowitz and Bier 2004; Berkowitz and Grych 1998) involves explaining behaviors and their implications to children. Over time, children begin to understand the links between behaviors and consequences resulting in greater understanding. Second, modeling (Bandura 1991) goes hand in hand with the first technique. Modeling behaviors that support targeted values and beliefs can reinforce similar behaviors in the future. Primary caregivers can provide model behaviors that nurture and support pro-social thinking, feeling and actions where children have the opportunity to adapt these behaviors. Third, perpetuating an environment where everyone's opinions are at least sought and valued not only offers a forum for the exchange of ideas and perspectives, but it also further reinforces the process of sharing ideas and fostering self-esteem.

Last, these findings suggest areas of opportunity to affect and prime essential social and emotional competencies in children. Exercises and programs such as those developed by Myers and Hodges (2013) and others (Schonert-Reichl 2012) may help children or young adolescents develop their PT abilities and facilitate prosocial behaviors. Likewise, primary caregivers can learn to target specific behaviors through participation in workshops designed to train parents to address specific problematic areas (Bear et al. 2003; Kumpfer and Alvarado 1995).

Limitations and Future Research

This study contains a number of limitations. First, this was a self-report, cross-sectional study. Thus, it was a snapshot in time and does indicate causality but suggests relationships. Second, in conducting the literature review, there was no general agreement about theoretical or operational definitions (labels) for sympathy, empathy, and PT (Wang et al. 2012). Third and in addition to sympathy, incorporating other social emotions (Farrant et al. 2012; Jagers et al. 2007) might shed light on a broader range of affective responses. Such responses might include a child identifying positive or negative affect in another person and examining how that affect varies in its influence on the individual's sympathy and empathy abilities. However, in this 50-item study, adding additional questions to capture these relationships, would increase the likelihood of response fatigue effects and thus threaten internal validity. Fourth, although related research found cultural differences (Yeo et al. 2011), this study did not detect such differences by country. Further, external validity is limited to girls ages 6-16. Fifth, the study did not control for social desirability effect. Scales such as the Crowne and Marlowe (1960) can tease out social desirable response influences on reported perceptions of whether certain types of inter-personal violence are justifiable or acceptable. Incorporating such scales can add as many as 40 additional questions to a survey resulting in an ineffectively lengthy instrument, especially in the case of children participants who will become bored and tired of answering a large number of questions. Sixth, this study focused on interpersonal physical aggression and did not incorporate other types of aggression such as group or institutional, as well as verbal and relational (Yeo et al. 2011). The fact that the PT path coefficient to justified less severe interpersonal violence was weaker than to those of the other violent scenarios infers situational characteristics and context might affect variance. Research might examine and compare different types of aggression and contexts (Yeo et al. 2011), such as physical, verbal, and relational/indirect with family type, sympathy, and PT. Last, the significant error correlations intimate an interaction effect between the severity of the violent act and justification context. Future research might address these constructs separately, as well as in combination.

Conclusion

This study's findings suggest that conversation-oriented family communication or the pluralistic parenting style fosters girls' abilities to have empathy and sympathy for others. This was also demonstrated in the conversation

communication associated with consensual parenting. On the other hand, conformity-oriented family communication or the protective parenting approach is associated with less perspective-taking and empathy. Notwithstanding these relationships, all violence was perceived as wrong; however, severity of the violent act may influence the moral reasoning about interpersonal violence process. PT and sympathy may play their separate roles in this assessment. As mediators, their roles may be limited to the more serious cases of interpersonal violence, which activate more involvement and contextual understanding requiring PT and even sympathy in some cases of moral assessments.

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