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Humor as a Moderating Variable of the Relationship Between Family Conflict and Self-Regulation in Children: A Two-Year Panel Study

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Humor as a Moderating Variable of the Relationship Between
Family Conflict and Self Regulation in Children:
A Two-year Longitudinal Study

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A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Masters of Science

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ABSTRACT

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Conflict is a common problem among families, and children may be negatively affected by this family dynamic. Some family characteristics may protect children from negative effects, even in the midst of conflict. Though little research has been conducted addressing familial effects of humor, the current longitudinal study examined the moderating effect of humor on the relationship between family conflict and child self regulation.

Two hundred ninety six two-parent families from the Seattle area were surveyed and observed as a party of Brigham Young University's Flourishing Family Project. Family conflict and coded humor from an observation task were assessed at time 1 and self regulation in the child was assessed at both time 1 and one year later.

Results indicated that (1) family conflict negatively influences child self regulation, (2) that humor between fathers and children is associated with child self regulation, and (3) that humor between fathers and children may buffer the effects of family conflict on a child's self regulation. Humor between mothers and children and between mothers and fathers did not moderate the relationship between family conflict and child self regulation. These results suggest that some forms of family humor may provide families with healthy child outcomes. Limitations and implications for family therapy are discussed.

Keywords: humor, self regulation, family conflict, Flourishing Families, child outcomes, father influence, father role

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CHAPTER 1

Introduction

Childhood experiences seem to affect one's mental and emotional well being in adulthood (Kuperminc & Brookmeyer, 2006; Cummings, Davies, & Campbell, 2000). As a large majority of childhood experiences take place within the context of family, it is clear why the family system has long considered a catalyst for adult functioning (Nelson, 2008). This focus on family life is warranted as both negative and positive experiences within families can have long term influence.

Family interactions may negatively affect child well-being, with some effects carrying on to adulthood. For instance, substance abuse, sexual abuse, and physical abuse have all been shown to have negative effects which can carry on from one generation to the next (Thornberry & Krohn, 2006; Leifer, M., Kilbane, T., Jacobsen, T. & Grossman, G., 2004; Green, 1998). Even family conflict may result in impaired functioning in childhood (Rhoades, 2008; Cummings & Davies, 2002; Grych & Fincham, 1990) and destructive habits which may carry on into adult relationships (Feeney, J.A., 2006). Such conflict may lead to increased child stress, poor parental modeling, and the deterioration of parent-child relationships (Grych & Fincham 1990). Alternatively, positive characteristics of families may protect children from such outcomes (Hughes & Gullone, 2008; Richmond & Stocker, 2006).

For instance, families who cultivate self regulation may protect their children against negative outcomes. Self regulation is characterized by the degree to which an individual is able to identify and control strong emotion in order to redirect behaviors toward adaptive functioning (Pulkkinen, 2001). Theorists suggest that self regulation may enable children to cope with

difficult life experiences and promote overall psychological resiliency (Tugade & Fredrickson, 2007). Furthermore, self regulation has been shown to be associated with a number of positive child outcomes including fewer declines in social, academic, and behavioral domains and may even help minimize the effects of family conflict (Gottman, Katz, & Hoover, 1997).

The use of humor within families may provide similar benefits. Like self regulation, individual use of humor is associated with positive child outcomes such as high emotional management ability, social competence, empathic concern, and social desirability (Yip & Martin, 2006; Hampes, 2001; Cann & Calhoun, 2001). Though no research, to date, specifically shows a relationship between *family* humor and child outcomes, it is hypothesized in this study that family humor may buffer the effects of family conflict by increasing child self regulation.

CHAPTER 2

Review of Literature

Families and Child Well-Being

Families have a large impact on child functioning, given that some characteristics of families promote child well-being (Hughes & Gullone, 2008; Richmond & Stocker, 2006) while others may lead to, or intensify, child maladjustment (Cummings, 1994). Parental psychopathology, parental stress, and punitive parenting styles are all associated with poorer child outcomes (Nelson et. al., 2007; Buchanan, Flouris, & Brinke, 2002). Such outcomes may include losses in academic, social, cognitive and physiological functioning (Cummings & Davies, 2002).

Conflict is one family dynamic or characteristic that can negatively affect children. Conflict affects child maladjustment in a number of ways, namely via increased child stress, poor parental modeling, and the deterioration of the parent-child relationship (Grych & Fincham 1990). Furthermore, parents may also become susceptible to maladjustment, as family conflict is associated with increased risk for depression and addictive behaviors (Cummings & Davies 2002). This can also create psychological impairment in children and parents, leading to further family conflict. Thus, families may become trapped in negative interaction patterns.

Families and Self Regulation

However, the degree to which children are affected by conflict may depend on how well children self regulate (Cupach & Olson, 2006; Crockenberg & Langrock, 2001). In addition to identifying and controlling strong emotion, self regulation includes the ability to influence the types of emotions experienced, when the emotions are experienced, and how such emotions are

expressed (Gross, 1999). As such, people who are able to self regulate are able to identify emotions and behaviors associated with conflict. This skill allows persons to potentially minimize or prevent the escalation of emotion, thereby reducing the harmful effects of conflict.

Gottman, Kats, and Hoover (1997) provide empirical evidence for the benefit of self regulation, finding that parents who modeled healthy self regulation had children with better outcomes than parents who were not good models of self regulation. These children had better social relationships with peers, exhibited higher reading and math skills, were better able to focus their attention, and had fewer infectious diseases. In addition, parent self regulation mitigated the effect of family conflict. If at least one parent modeled self regulation in conflicted families, children experienced fewer declines in social, academic, and behavioral domains than children in families who used an emotion dismissing approach (e.g. ignoring or berating children's emotion).

Unfortunately, however, the presence of conflict itself may prevent families from both developing and using self regulation skills. Because early relationships beget foundational experiences, families are essential for the development of self regulation (Thompson & Meyer, 2007). As a parent soothes, responds, or ignores a crying infant, the child simultaneously learns about how emotion elicits responses from self and others. Thus, children learn – both directly and indirectly – how to identify and process emotion through family relationships (Thompson & Meyer, 2007). Therefore, if parents are non-responsive or respond negatively as a function of family conflict, these experiences may result in poor self regulation.

Thompson and Meyer (2007) suggest distinctive ways in which families either aid or prevent healthy self regulation. The first of these is direct intervention by the parent on behalf of a child. In this instance, a parent acts a surrogate self-regulator for the child by intervening in

order to calm, distract, engage, or quiet, etc. Many such attempts are positive, as parents often model appropriate ways to manage emotion through these means. However, parents in conflict do not always initiate these self-regulatory behaviors. Instead, behaviors such as poor modeling and failure to soothe a distressed child may result in poorly developed self regulation (Cupach & Olson, 2006). These contrasting positive and negative effects may also be seen in how parents personally respond to their child's emotions. As with the above, parents may model positive ways of recognizing and coping with emotion, or may demonstrate unsympathetic or dismissive responses to the child's emotion. These parental responses subsequently influence how children respond to their own emotions. For instance, when a parent responds negatively to a child's negative emotions, the child's emotions may intensify, thus contraindicating the child's attempts at regulation.

Thompson and Meyer (2007) also suggest that the broader context of the family environment is extremely influential. They posit that the family environment itself dictates how emotions are perceived based on emotional beliefs. Some families – such as those in conflict – may perceive emotion to be threatening, while others view it as adaptive. It appears that the family at large is either a facilitative or inhibitive environment for self regulation. The family system may also facilitate self regulation by discussions surrounding emotion (Gottman, Katz & Hoover, 1997), as a child's ability to identify emotion is aided by parent-child interactions surrounding feelings (Thompson & Meyer, 2007). Parents also take the role of coach by verbally problem-solving about how to cope with emotion. However, if parents are dismissive or unresponsive to a child's emotion, this type of emotional learning may not occur (Gottman, Katz & Hoover 1997).

As children grow older, their own reactions to others also affect self regulation learning. Snyder, Hughes and Simpson (2006) suggest that self regulation is an interpersonal endeavor – that emotion and behaviors of family members interact with one another to intensify or diminish emotionality. Thus, children may become more emotional as family members exhibit emotional dysregulation. For example, in the presence of high family conflict, family stressors may give way to poor self regulation and increased internalizing and externalizing behaviors in children (Cupach & Olson, 2006).

In fact, poor self regulation may be especially likely in high conflict families (Cupach & Olson, 2006; Crockenberg & Langrock, 2001). In conflict-ridden families levels of anger, sadness, and anxiety are elevated (Cummings, 1994). Furthermore, such families are rarely relieved from this state of chronic arousal. This state of arousal is related to family members being more emotionally dysregulated. Davies and Cummings (1994) identified multiple processes that are related to diminished self regulation. First, children in conflict-ridden families often experience a state of emotional exhaustion – psychological energy becomes depleted as a result of ongoing arousal, thus resulting in decreased ability to employ self regulation skills. This state of heightened arousal may also lead to increased sensitization as children’s emotional responses may intensify over time. Additionally, this heightened state of arousal may cause children to intervene in parental conflict, which if successful, may reinforce the child’s high level of emotionality. Unsuccessful attempts at decreasing negative emotion may lead to feelings of hopelessness. Parents in conflict also contribute to children’s decreased ability to self regulate, as they are often poor examples of self regulation themselves. Without positive models of regulation, children may not learn how to implement self regulation in the presence of conflict (Thompson & Meyer, 2007). Combined, these effects suggest that the presence of family

conflict is negatively associated with self regulation in children. Given these effects, identifying buffers to family conflict may result in increased self regulation within the family and subsequent positive child outcomes.

Self Regulation and Humor

One potential buffer for individual and family maladjustment is humor. Though no studies specifically examining humor and family systems were found, other humor research provides important insight into this potential relationship. A literature review will follow in regard to the following areas. First, humor may diffuse family conflict thereby preventing the escalation of negative emotion. Second, humor may facilitate self regulation and thus aid in buffering against negative affect. Third, humor may provide some protection against internalizing and externalizing symptomology in individuals. Fourth, humor may promote healthy parent attachment, thus increasing the likelihood of self-regulatory behaviors. Such effects may collectively provide effective coping mechanisms for families.

Humor and Conflict Diffusion

Humor is characterized as (a) the playful identification, creation, or enjoyment of incongruity in language or interactions, (b) an optimistic view regarding the lighter side of personal adversity, thus resulting in continued good mood, and (c) the ability to make others laugh or smile (Peterson & Seligman, 2004). Due to its relational nature, humor may benefit families as well as individuals. Humor may minimize conflict and enhance relationship quality, thereby helping families to minimize childhood maladjustment and promote self regulation. For example, multiple studies suggest that humor may help to mediate conflict (Campbell, Martin, & Ward, 2008; Norrick & Spitz, 2008; Butzer & Kuiper, 2008; Bippus, 2003; Odell, 1996).

Collectively, these studies indicate that when used positively, humor may alleviate distress for conflicting couples. Positive humor may benefit such couples by easing the tension associated with conflict and by helping individuals temper their own anxiety (Odell, 1996). Additionally, couples who employed positive humor during conflict were better able to recover from problem solving discussions and had greater relationship satisfaction (Campbell, Martin, & Ward, 2008). In couples, the use of humor during conflict may not only decrease intensity in the moment, but may also increase relationship quality over time (Butzer & Kuiper, 2008; Ziv & Gadish, 1989).

Ziv and Gadish (1989) demonstrate how humor may increase relationship quality. In their correlational study, they tested the relationship between intentional humor (humor used to elicit positive reaction from another) and marital satisfaction among fifty married couples. Each member of the couple completed both a marriage scale and humor questionnaire. Results indicated that humor, both given and received, was highly correlated with marital satisfaction for husbands (a similar, statistically non-significant, relationship was found for wives). Moreover, each spouse's positive perception of the other's humor was highly correlated with marital satisfaction. Thus, humor, especially when perceived as positive, may contribute to increased relationship quality. However, because of Ziv and Gadish's varying results between husbands and wives, it will be important to examine the differential effects of gender on humor in the current study. Moreover, stronger statistical evidence is needed to reinforce the association found by Ziv and Gadish, as the correlations do not allow for causal analyses.

This increase in relationship quality may also apply to the whole family. In a study regarding the potential benefits of therapeutic family humor, Brooks, Guthrie and Gaylord (1999) conducted interviews with 35 families coping with long-term illness. Their qualitative

analysis of these interviews revealed that families who expressed more humor showed a greater capacity for family flexibility in roles and expectations. This added capacity may allow families to more effectively cope with conflict and increase relationship quality. However, no studies could be found that address either family conflict and humor or family relationship quality and humor. It will be important in the current study to determine if the relationship of humor buffering the effects of conflict in couples will also hold true for families. In fact, no additional studies were found which examine the specific benefits of humor for the family system at large. Thus, while children may benefit from families' use of positive humor, this connection is yet to be empirically validated.

Humor as a Facilitator of Self Regulation

Though no other studies highlight family humor benefits, some additional evidence suggests that children may benefit from individual humor. Specifically, children may benefit from humor as it may aid increased self regulation. Two main studies highlight the association between humor and self regulation in individuals. Giuliani, McRae, and Gross (2008) describe how humor may contribute to the reappraisal of negative emotions. Sixteen female undergraduate students participated in this study by watching a series of amusing television clips. For each clip, participants were instructed to “look,” “increase,” or “decrease.” The “look” instruction was aimed at instigating a neutral response, or a baseline reaction. Both the “increase” and “decrease” commands served as a prompts for reappraisal. Following an “increase” command, participants were expected to think about the clip in such a way that would make it more personally amusing. For the “decrease” command, participants instead used reappraisal to decrease the degree of felt amusement. Following each clip and its accompanying

command, the participants rated how amused they felt. This data was used in conjunction with physiological measurements and coded assessments of videotaped participant behavior.

These authors found that both physiological and behavioral (videotaped) responses matched the participants self-report of level of amusement. The authors suggest that this physiological and behavioral data confirms that participants actually succeeded in changing their emotional state, rather than only changing their subjective experience of the emotion. Giuliani, McRae, and Gross (2008) suggest that this finding provides important insight into personal coping strategies. If indeed, individuals are able to behaviorally and physiologically induce positive affect, teaching individuals to induce amusement may help them to self regulate. Though promising in its assertions, such a claim necessarily needs further empirical support due to the small, limited sample size and the community (rather than clinical) nature of the sample. Additionally, because of the contrived laboratory environment used in this study, these results may not necessarily apply to non-laboratory situations. Studies which look at the role of humor in families within a naturalistic setting will help to determine if the findings with individuals also hold true for family relationships.

Strick, Holland, van Baaren, & van Knippenberg (2009) also suggested that humor may function in conjunction with self regulation. However, their suggested mechanism is that of cognitive distraction rather reappraisal. Therefore, instead of allowing individuals to perceive stimuli in a different way, humor may instead allow individuals distraction from negative emotions. These researchers tested this hypothesis via a contrived experiment regarding emotion and preference for colors. This method was used in order to prevent participants from becoming aware of the research aims, thus preventing participants from skewing the validity of the research findings. Participants, 15 male and 75 female students, were asked to view a series of pictures.

These pictures were composed of neutral pictures, mildly negative pictures, and strongly negative pictures. In half of these trials, participants were shown either a positive, unhumorous picture or a positive, humorous picture directly following the neutral or negative stimuli. After each trial, participants were asked to indicate how unpleasant they felt (1 = not at all, 9 = very much) in response to the negative pictures. In keeping with the cover-story, they were also presented with a picture of a colored square and asked to indicate how much they liked the color of the square. The results of this experiment indicated that participants indicated less unpleasantness in response to negative stimuli when a humorous picture followed than when a positive, non-humorous picture followed. Additionally, for the trials in which participants received a positive, non-humorous after a negative picture, participants indicated greater feelings of unpleasantness for strongly negative pictures than for mildly negative pictures. However, when presented with a humorous picture, there was no difference in the degree of unpleasantness between the strongly and mildly negative pictures. The authors suggest that these results provide evidence for the use of humor as a cognitive distraction – because humor was a stronger emotion-attenuator than positive stimuli alone, and because humor equally attenuated the effect of mildly and strongly negative stimuli, they suggest that this effect is more potent than a simple mood elevator. However, like Giuliani, McRae, and Gross's 2008 study, these results have limited generalizability due to participant selection and study methodology.

Together, these studies provide some evidence that humor aids self regulation. However, as mentioned previously, these studies are limited in scope due to sampling procedures. Thus, further empirical evidence is also necessary for establishing a concrete relationship. Though additional studies addressing this link are not currently available, some further evidence is suggested in the effects of positive humor. We may hypothesize that if humor is associated with

self regulation, then humor and self regulation may demonstrate similar benefits. Current research supports this notion, as many of the benefits of self regulation have also been demonstrated in conjunction with humor.

Humor and Internalizing/Externalizing Symptomology

For instance, self regulation has consistently shown to be associated with positive child and adult outcomes (Pulkkinen et al., 2002). Similar outcomes are also found in the humor literature. In a study regarding humor and social competence, positive humor was associated with high emotional management ability and social competence (Yip & Martin, 2006). Humor may also elicit feelings of hope (Vilaythong, Arnau, Rosen & Mascaro, 2003) and empathic concern (Hampes, 2001). Additionally, research on personality perceptions shows that those described as having an “above average” sense of humor are regarded as more socially desirable and more agreeable than those with a “typical” or “below average” sense of humor (Cann & Calhoun, 2001). These factors may suggest that, like self regulation, humor may contribute to positive outcomes.

Führ’s (2002) study regarding humor and coping furthers this notion. The study, composed of 960 children ages 11-14 found that children use humor as a means of coping, namely by using humor to alleviate sad or angry feelings. Moreover, at age 12, children showed a significant increase in their use of coping humor to deal with stressful or uncertain situations. A 2007 dissertation provides additional insight into the humor-coping relationship. The study of 155 first-grade children found that children who used positive forms of humor were more well-liked by peers, suggesting that the use of humor may buffer children from maladjustment via increased social support (Peterson, 2007). However, the study found that children who engaged in *negative* humor were more likely to show internalizing symptoms. These findings suggest

that healthy forms of humor may provide coping benefits while negative forms may be detrimental. For this reason, the current study addresses healthy forms of humor only.

Though additional evidence regarding humor and child maladjustment is sparse, research regarding the effects of humor on symptomology in adults may provide additional evidence for the psychological benefits of humor. A study by Danzer, Dale, and Klions (1990) suggests that humor may mitigate adult depressive symptoms. In their study, feelings of depression were induced by means of a series of depressing slides. Following this, participants either received no treatment (control) or listened to a humorous or non-humorous recording. Though the other conditions also reduced induced depression, only the humor reduced feelings of depression to the baseline level. Yovetich, Dale, & Hudack (1990) found similar results for anxiety symptoms. Anxiety was induced by informing participants that they would be receiving a shock within a short amount of time. During this waiting period, participants listened to a humorous, nonhumorous, or no recording. Those in the humor condition reported less anxiety at the end of the experiment than those in other conditions. These effects may also be seen more generally, as the presence of humor may also reduce general negative mood (Cann, Calhoun & Nance, 2000) as well as promote overall psychological resilience (Thorson, Powell, Sarmany-Schuller, & Hampes, 1997). These findings suggest that humor does indeed have some capability for relieving internalizing and externalizing symptoms in adults. Due to the limited research regarding similar findings for children, it will be important to provide further empirical evidence regarding this connection.

Humor and Attachment Theory

One important consideration regarding humor and self regulation is based in attachment theory (Shaver & Mikulincer, 2004; Bowlby, 1973). Attachment theory addresses (1)

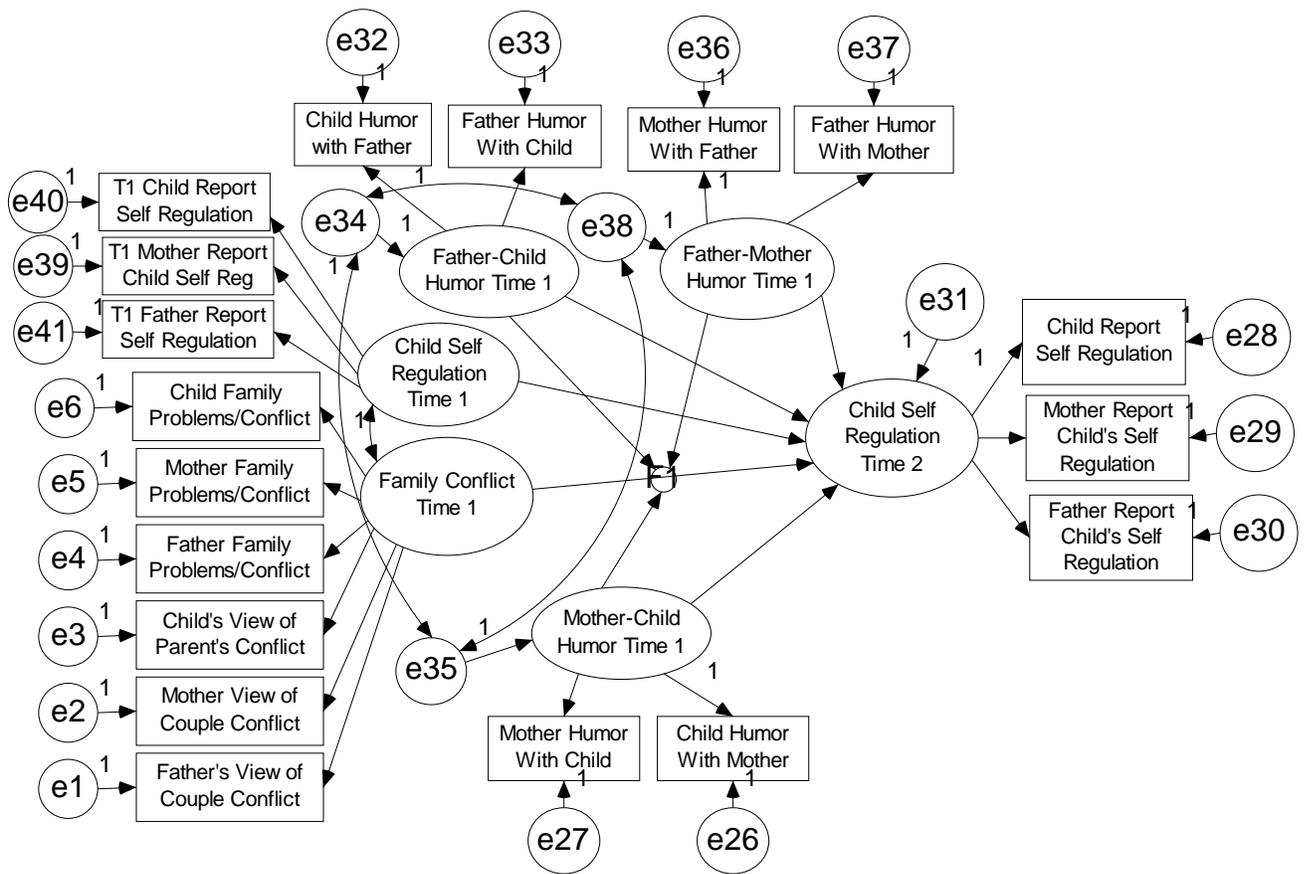
individuals' level of comfort in seeking closeness with others and (2) individuals' belief about whether or not others will provide support and comfort. Those who are comfortable in seeking closeness and believe that support and comfort will occur are considered to be securely attached and tend to have positive relational outcomes. However, if either or both of these dimensions are missing, individuals are considered to be insecurely attached, dismissive, or preoccupied. Each of these styles may hinder relationship functioning (Rholes & Simpson, 2004). Thus, from the perspective of attachment, conflict is associated with insecure, dismissive, or preoccupied attachment styles, all of which prevent appropriate modeling of self regulation. Thus, parent dysregulation may make it less likely for children to learn healthy self regulation models. It may be that the use of humor allows individuals to self regulate by reducing emotional arousal. Therefore, as individuals use humor, children may witness instances of self regulation and subsequently learn to implement self-regulatory techniques. However, no research regarding this association was found at the time of publication. Therefore, it will be important in the current study to see if humor moderates the effect of conflict on self regulation.

Because humor appears to benefit individuals in multiple ways, there is a need to determine how humor might moderate or buffer the relationship between family conflict and child outcomes. It may be that in the presence of good family humor, conflict may have minimal effect on children's ability to self regulate. Furthermore, no research to date has been found which examines the effects of humor on emotion regulation over time. Because of this, longitudinal data is needed to rule out potential confounding variables and to solidify a causal association between humor and self regulation.

The purpose of this study was twofold: first, to examine the relationship over time between conflict among family members and children's self regulation, and second, to examine

how family humor is related to self regulation and whether family humor moderates the relationship between family conflict and children's self regulation. Figure 1 shows the hypothesized relationship between these variables as well as the measurement model for each of the variables.

Figure 1. Proposed Measurement and Conceptual Model with Family Conflict and Family Humor Predicting Child Self Regulation, with Family Humor Moderating the Relationship between Family Conflict and Child Self Regulation.



The following hypotheses will be tested:

- 1) Family conflict at time 1 will be negatively associated with child self regulation at time 2 when controlling for time 1 child self regulation.
- 2) Father-child humor at time 1 will be positively associated with child self regulation at time 2 when controlling for time 1 child self regulation.
- 3) Mother-child humor at time 1 will be positively associated with child self regulation at time 2 when controlling for time 1 child self regulation.
- 4) Mother-father humor at time 1 will be positively associated with child self regulation at time 2 when controlling for time 1 child self regulation.
- 5) Father-child humor, mother-child humor, and mother-father humor at time 1 will be a significant moderator in the relationship between family conflict at time 1 and the child's self regulation at time 2 when controlling for time 1 child self regulation.

CHAPTER 3

Method

Participants

The participants for this study consisted of families surveyed by the *Flourishing Family Project* (FFP). The Flourishing Families Project is an ongoing, longitudinal study of family processes that links family interactions to child outcomes. Included in this study are all two-parent families with a child between 10 and 14 from the second wave of FFP data. Single-parent data was not included as cross-group comparison is not within the scope of this study. In-home interviews consisted of a one-and-one half hour self-administered questionnaire and one hour of video-taped interaction. This interaction included a Mother/Child interaction task, a Father/Child interaction task, and a Mother/Father interaction task, as well as a Family Problem Solving task. Both questionnaire items and observational data will be used for this study.

Of the five hundred families in the Flourishing Families database at Wave 1, three hundred fifty three were two-parent families. Ninety-six percent of these families participated at Wave 2 leaving 339 two parent families. Of these 339 families, 43 were eliminated because of incomplete observational data on humor; either the camera didn't work or the sound quality was too poor to code. The remaining 296 families comprise the sample for this study. Gender distribution for children in families sampled was 50.4% male and 49.6% female. At time 1, ages of children ranged from 10 to 14, with the mean age of boys at 11.26 (SD = .97) and 11.18 for girls (SD = .95). The mean age of fathers and mothers was 45.38 (SD = 6.10) and 43.49 (SD = 5.32) respectively. Eighty six point 4 percent of fathers, 82.8% of mothers, 81.3% of daughters, and 79.5% of sons were Caucasian. Five point one percent of fathers, 4.1% of mothers, 4.2% of

daughters and 2.7% of sons were African American. Three percent of fathers, 3.7% of mothers, 8.2% of daughters, and 11% of sons were multiracial. The remaining sample members, 5.4% of fathers, 9.4% of mothers, 6.3% of daughters, and 6.9% of sons, were Hispanic, Asian American, or another race. Sixty eight percent of fathers and 70.5% of mothers received a bachelor's level education or higher. At time 1, annual income distribution was as follows: 8% of the families made under \$25,000 per year, 8.2% made between \$25,000 and \$50,000 a year, 61% made between \$50,000 and \$100,000 a year, and 19.8% made over \$100,000 per year. At time point one, seventy nine percent of mothers reported current employment with 31.5% working 35 or more hour per week. A majority of parents were in their first marriage (88.4% of husbands and 85.1% of wives) with 11.6% of husbands and 14.9% of wives in remarriages. At time 1, ninety six point three percent of parents described themselves as married, while 3.7% reporting cohabiting. See Table 1 for further demographic information.

Procedure

All participant families were selected from the Seattle, Washington area and were first interviewed in 2007. These families were recruited primarily by use of Polk Directories, a national telephone database purchased from InfoUSA. The database contains contact information for some 82 million households, as well as demographic data including the presence and ages of children. Families were selected to reflect socio-economic and racial stratification of reports from local school districts. All families with a child between ages 10 and 14 were selected for preliminary contact. Subsequently, researchers employed a multi-stage recruitment protocol. In the first stage of the recruitment protocol researchers sent an introductory letter to potentially eligible families. Thereafter, research teams conducted phone calls and personal

Table 1. *Demographic Characteristics of Sample (N=296 families)*

	Fathers	Mothers	Girls	Boys
Age at Time 1	45.38(6.10)	43.49(5.32)	11.18(.95)	11.26(.97)
Age at Time 2	46.45(6.03)	44.56(5.70)	12.29(.98)	12.23(.99)
	Percentages			
Race				
Caucasian	86.4%	82.8.0%	81.3%	79.5%
African Am	5.1%	4.1%	4.2%	2.7%
Hispanic	1.0%	3.0%	2.1%	1.4%
Asian American	2.0%	4.4%	4.2%	4.1%
Other	2.4%	2.0%	0.0%	1.4%
Multiethnic	3.0%	3.7%	8.2%	11.0%
Parents' Education				
Less than H.S.	0%	1.4%	--	--
High School Diploma	6.1%	4.4%	--	--
Some College	25.9%	23.7%	--	--
Bachelors Degree	38.6%	41.4%	--	--
Grad/Professional Degree	29.4%	29.1%	--	--
Household Income	Time 1		Time 2	
Under \$15000	4.2%		2.4%	
\$15001-24999	3.8%		5.8%	
\$25000-49999	8.2%		15.4%	
\$50000-74999	15.6%		34.6%	
\$75000-99999	45.4%		29.1%	
\$100000-119,999	9.0%		2.7%	
\$120,000-149,000	6.5%		4.5%	
\$150,000+	4.3%		4.1%	
Missing	3.0%		1.4%	
Family Size	4.37 (1.03) 3-9 range		4.42 (1.00) 3-9 range	
Marital Status				
Married	96.3%		96.9%	
Cohabiting	3.7%		3.1%	

visits in order to confirm eligibility and willingness to participate. Following confirmation of eligibility requirements and consent, researchers scheduled appointment times with the family for an assessment interview.

In addition to random selection via telephone database, the Flourishing Families Project recruited through referral from participant families. Following the in-home family interview, researchers invited each family to name two other families that might meet eligibility requirements for the study. This process allowed for an increase in the socio-economic and

ethnic diversity of the sample, which previously had been somewhat limited due to the nature of the Polk Directories database.

Combined, these recruitment protocols yielded a total of 1,064 potentially eligible families. Of these, 500 families had a child within the target age range and agreed to participate. Two hundred thirty eight of these families were obtained via database, 262 from referrals. Of those families who met eligibility requirements, three hundred fifty three were two-parent families and 147 were single-parent families. The most common reasons cited for non-participation in the study were privacy concerns and lack of time.

The in-home assessment interview began with researcher introductions. Following introduction to the family, the research team asked each family member to complete a brief description of information about their family. Thereafter, the parents and child alternated between completing video and written assessment tasks. While the mother and child completed their interaction task, the father completed the written assessment. After the mother/child interaction task, the mother completed the written assessment while the father and child completed the interaction task. After participating in both Mother/Child and Father/Child interaction tasks, the child then completed the written assessment while parents completed the couple interaction task. This format allowed for confidentiality, as each completed the written questionnaire outside the presence of other family members. Additionally, the protocol ensured that family members did not have the opportunity to collaborate in their answers to assessment questions. Of the data collected, less than 1% was missing. As part of the in-home assessment, researchers checked for missing and double-marked answers, thus allowing for increased assessment completion.

Measures

Five latent variables were created for use in the Structural Equation Model for this study. These variables were family conflict, three family humor variables, and child self regulation. The three family humor variables were mother-child humor, father-child humor, and mother-father humor.

Family Conflict Latent Variable

The family conflict variable is composed of six indicators. The indicators for the family conflict latent variable were the child's score on the family problems/conflict scale (child version), the child's score on the parental conflict/triangulation scale, the father's score on family problems/conflict (parent version) scale, the father's score on the martial conflict scale, the mother's score on family problems/conflict (parent version) scale, and the mother's score on the martial conflict scale.

Family Problems/Conflict Measure. Child, father, and mother reports of family problems/conflict were measured using a 27-item conflict checklist, completed by each family member. For these items, participants were asked to indicate how often certain topics were contentious issues in their family. Checklist items include conflict surrounding school grades/homework, choice of friends, money, and chores at home. Participants were asked to respond to each question using a 5-point Likert scale, with scores ranging from 1 (never an issue) to 5 (always an issue). Possible scores range from 27 to 135. The Cronbach reliability coefficient for this sample was .89 for fathers, .88 for mothers, and .90 for child respondents. Since this measure was created for the Flourishing Families study, factor validity studies and concurrent studies regarding how the scores from this measure compare with scores from other family measures will be determined as part of this study. The factor loadings on the latent

variable in this study were .90 for child report of family conflict, and .94 for mother's report of family conflict, and .93 for father's report of child conflict.

Marital Conflict Measure (Parents). The marital conflict scale was measured by eight items drawn from the RELATE assessment battery (Busby, Holman, & Taniguchi, 2001). For this scale, parents indicated the frequency of eight common couple problems. These items included topics such as, "rearing children," "roles (who does what)" and "financial matters." Participants responded via a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). Previous reliability (Busby et. al., 2001) for this measure was .80 for males and .83 for females. The Cronbach's alpha for this sample was .70 and .78 for fathers and mothers respectively.

Marital Conflict Measure (Children). The child's report of marital conflict was measured by an adapted version of the Children's Perception of Interparental Conflict Scale (Grych, Seid, & Fincham, 1992). While the original scale contains 51 items, the Flourishing Family survey includes 10 items. For this scale, children were asked to respond to questions concerning frequency of parental conflict as well as child triangulation in conflict. Items include "I see my parents arguing or disagreeing," "they may not think I know it, but my parents disagree a lot," and "I feel caught in the middle when my parents argue." Responses were based on a 5-point Likert scale, ranging from 1 (*never*) to 5 (*all of time*), with total scores ranging from 10 to 50, with higher scores indicating increased child perceptions of parental conflict and child triangulation. Reported reliability coefficients from the original scale were .71 (Grych, Seid, & Fincham, 1992). The Cronbach reliability coefficient for this sample was .78. Face and content validity for the interparental conflict scale was determined by having content experts rate the items regarding how well each item captured the dimension of the domain, and only those that received high ratings were kept. The factor loadings were .61 for child's report of interparental

conflict, .72 for mother's report of couple conflict, and .74 for father's report of couple conflict. It appears that this measure has adequate reliability and validity for research.

Family Humor Latent Variables

These variables were composed of two indicators each, with data derived from observational tasks and coded via the Iowa Family Interaction Rating Scales (Melby, et al., 1998). The Iowa Family Interaction Rating Scales are an observational coding protocol designed to assess familial and marital relationships (Melby, et al., 1998). Subsequent research provides reliability and validity for several of the Iowa Family Interaction Rating Scales (i.e., Melby, Conger, Ge, & Warner, 1995; Melby, Conger, & Puspitawati, 1999; Melby, Ge, Conger, & Warner, 1995). Only the scale used to code Humor (HU) was used in this study.

The three Family Humor variables were Mother-Child Humor, Father-Child Humor, and Mother-Father Humor. Mother-Child Humor was created from the mother's score and the child's score during the Mother/Child interaction task. Father-Child Humor was created from the father's score and the child's score during the Father/Child interaction task. Mother-Father Humor was created from the mother's score and the father's score in the Couples interaction task. Thus, two observed humor scores were used for each latent variable. Because the interactional tasks were dyadic in nature, it made conceptual sense to code humor within the dyads, e.g. father's humor in the context of interaction with the child and child's humor within the context of interaction with the father, and so on with the additional two interactional tasks.

Observed Humor Measure. Assessment using the Iowa Family Interaction Rating Scales is conducted by trained observational coders, who first observe behaviors and subsequently rate interactions using the protocols delineated by the scales. In order to ensure reliability among coders, each coder completed 90 hours of training. Training began by studying the coding

manual and completing three written tests for comprehension. Thereafter, coders completed practice coding tasks with subsequent feedback concerning performance. At this point, coders were required to complete a criterion task with 80% accuracy. Criterion tasks had previously been coded by either the Iowa Institute for Social and Behavioral Research or by other experienced coders from Brigham Young University. Following training, tasks were randomly selected to be coded by both a primary coder and reliability coder. After initial coding, both the primary and reliability coders recoded the task together in order to come to consensus concerning scores which differed between the two coders. Reliability coding continued until a coder reached 80% reliability consistently. At this point, reliability coding for each coder was reduced to only every fourth tape coded, but the primary and reliability coders did not know when a task was coded by both. In order to prevent coder drift, team trainings continued throughout the coding process. The scale for Humor (HU) ranges from 1 to 9, with 1 as the lowest score possible which means that no humor was observed for the individual during the task. For this code, descriptions are given for what a score of 1, 3, 5, 7, or 9 might look like 9 (e.g. frequency of funny, good-natured, non-sarcastic, lighthearted behaviors). An even score is given when behavior appears to fall between two descriptors. These codes will become the indicators for the latent variable Family Humor. The appendix includes the specific suggestions outlined in the Iowa manual (Melby et al., 1998) for scores from 1 to 9.

The inter-rater reliabilities were .79 for mothers and .80 for child in the mother child interaction task, .78 for fathers and .81 for children in the father child interaction task, and .85 for mothers and .75 for fathers in the couple interaction task. Factor loadings were .87 for fathers and .89 for children on the father-child humor latent variable; .92 for mothers and .91 for

children on the mother-child humor latent variable, and .90 for mothers and .91 for fathers on the mother-father humor latent variable.

Child Self Regulation

The Child Self Regulation variable is composed of father's report of the child's self regulation, mother's report of the child's self regulation, and the child's self report of self regulation.

Self Regulation Measure. Self regulation reports were measured using a revised version of Novak and Clayton's (2001) self regulation scale. The 13-item scale measures children's ability to regulate negative emotions and disruptive behavior, and to set and attain goals (Novak & Clayton, 2001). This scale is based on the work of Mezzich et al. (1997) and Dawes et al. (1999). Sample items from the parent version of the scale include "my child has difficulty controlling his/her temper," "my child gets so frustrated she/he feels ready to explode," and "often my child is afraid she/he will lose control over his/her feelings." Items from the child version include "I have a hard time controlling my temper," "I am afraid I will lose control over my feelings," and "I slam doors when I am mad." Respondents answer using a five-point Likert scale, with possible answers ranging from 1 (*never true*) to 4 (*always true*). Factors loadings were .73 for the child's self report, .54 for mother's report, and .76 for father's report

Control variables. The control variables used for this study were the age of child, the race of child, and the average of the two parents' reports of income, and time 1 self regulation reports.

CHAPTER 4

Results

The present study examined humor as a potential moderator for the effect of conflict on child self regulation. Six variables (Family Conflict, Mother-Child Humor, Father-Child Humor, Mother-Father Humor, Child Self Regulation Time 1, and Child Self Regulation Time 2) were used in Statistical Equation Modeling analyses to answer the hypotheses of this study. Mplus 5.2 (Muthén and Muthén, 2006) was used to perform a SEM comparison with gender as the variables to create the two groups, boys and girls. Age of child, race of child, and household income were added as control variables.

Descriptive Statistics

Means and standard deviations were calculated for each of the measured variables to show descriptive trends in the variables in the study. The means and standard deviations for all measured variables are shown in Table 2. For the conflict scales, children reported less conflict overall than parents. Both mean scores for child reports of family conflict and child reports of parental conflict were lower than mother's and father's reports (46.11 for daughters and 46.19 for sons versus 53.09 for mothers and 54.19 for fathers). In reference to the humor scale, fathers showed more humor with daughters than with sons (3.42 versus 3.00), while mothers did not show a significant difference. However, both fathers and mothers showed more humor in the couple interaction task than in the parent/child interaction tasks. No significant differences were found for the parent and child self regulation reports, both at Time 1 and Time 2.

Table 2. Means, Standard Deviations, Reliability and Factor Loadings for All Measured Indicators.

(N=296 families, 296 fathers, 296 mothers, daughters, sons)

Variables	Mothers	Fathers	Daughters	Sons
	χ (SD)	χ (SD)	χ (SD)	χ (SD)
Family Conflict Time 1				
Conflict Problems	53.09 (9.37)	54.13 (9.71)	46.11 (10.57)	46.19 (10.91)
Couple Conflict	18.79 (4.05)	18.78 (4.35)	9.25 (3.80)	9.07 (3.74)
Father-Child Humor Time 1	-----	3.53 (1.42)	3.42 (1.25)	3.00 (1.56)
Mother-Child Humor Time 1	3.76 (1.40)	-----	3.67 (1.37)	3.50 (1.48)
Mother-Father Humor Time 1	4.80 (1.32)	5.02 (1.55)	-----	-----
Child Self Regulation Time 2	34.52 (6.01)	34.41 (5.75)	36.96 (6.03)	36.88 (5.91)
Child Self Regulation Time 1 (Control Variable)	34.36 (6.06)	-----	36.37 (6.12)	36.47 (5.46)

Correlations between Variables of Interest

A correlation matrix for all measured variables was created and examined to determine if there are any problems with multicollinearity among the independent variables. Since none of the independent latent variables were correlated higher than .70, it was determined that there were no problems with multicollinearity. As shown in Table 3, many correlations were significant at the .001 level. Time 1 Child Self Regulation and Time 2 Child Self Regulation showed the strongest correlation ($r=-.68, p<.001$). Child Self Regulation was also significantly associated with other variables. Child Self Regulation was positively associated with Father-Child Humor at each time point (T1r = .24, $p<.01$; T2r = .32, $p<.001$) and was negatively associated with Family Conflict at each time point (T1r = -.31, $p<.001$; T2r = -.38, $p<.001$). Father-Child Humor was also negatively associated with Family Conflict ($r=-.34, P<.001$) as was Mother-Father Humor, though less significantly ($r=-.13, p<.05$). Humor variables were also significantly associated with each other. Mother-Child Humor was positively correlated with Father-Child Humor ($r=.42, p<.001$), and Mother-Father Humor was positively correlated with both Father-Child Humor ($r=.29, p<.001$) and Mother-Child Humor ($r=.35, p<.001$).

Table 3. *Correlations among All Latent Variables. (N=296 families, 296 fathers, 296 mothers, 149 daughters, 147 sons)*

Variables	1	2	3	4	5	6
1.Family Conflict Time 1	1.00					
2.Father-Child Humor Time 1	-.34***	1.00				
3.Mother-Child Humor Time 1	-.01	.42***	1.00			
4.Mother-Father Humor Time 1	-.13*	.29***	.35***	1.00		
5. Self Regulation Time 2	-.38***	.32***	.04	.07	1.00	
6.Child Self Regulation Time 1	-.31***	.24**	.01	.09	.68***	1.00

*p<.05, **p<.01, ***p<.001

SEM Results Assessing Humor as a Moderating Variable

Using Structural Equation Modeling with Mplus 5.2 (Muthén and Muthén, 2006), a four step approach was used to test the hypotheses in this study. First, a model with Family Conflict predicting Time 2 Self Regulation while controlling for Time 1 Self Regulation was analyzed. Results from this model indicated that Family Conflict is significantly related to Time 2 Self Regulation ($\beta=-.31$, $p<.001$) when controlling for Time 1 Self Regulation. These results confirm hypothesis 1 in that Family Conflict is negatively associated with Child Self Regulation. Next, a model which added Father-Child Humor, Mother-Child Humor, and Father-Mother Humor was analyzed. As shown in Table 4 under Model 2, Family Conflict in this model continued to be significantly related to Time 2 Self Regulation ($\beta=-.29$, $p<.001$). However, only the relationship between Father-Child Humor was significantly related to ($\beta=.19$) Time 2 Child Self Regulation. The paths from Mother-Child Humor and Mother-Father Humor to Time 2 Child Self Regulation were not statistically significant. In summary, hypothesis 2 that Father-Child Humor would significantly predict Self Regulation was accepted, but hypotheses 3 and 4 were rejected since Mother-Child Humor and Mother-Father Humor did not add any significant prediction when Father-Child humor was in the model.

In the third step, a model which included an interaction between Family Conflict and Father-Child Humor was analyzed to determine if Father-Child Humor was a significant moderating variable for the relationship between Family Conflict and Child Self Regulation. Mother-Child Humor and Mother-Father Humor were dropped from this model since they were not significant predictors in Model 2. In this model, both Family Conflict and Father-Child Humor continued to be significant predictors of Child Self Regulation ($\beta=-.29$, $p<.001$, $\beta=.28$, $p<.001$), and the interaction term with Father-Child Humor and Family Conflict significantly predicted Child Self Regulation at Time 2 ($\beta=-.26$, $p<.001$). The R^2 value for Time 1 Self Regulation was .36 for this model. These results partially support hypothesis 5, in that Father-Child Humor was a significant moderator in the relationship between Family Conflict and Child Self Regulation. In the last step, gender of child, age of child, race of child, and household income were added in addition to each of the variables that were in Model 3. Of these, only child gender showed a significant relationship to Child Self Regulation at Time 2 ($\beta=.19$, $p<.001$). As seen in Table 4, goodness of fit indices were acceptable with non significant X^2 values, CFI values greater than .95, and RMSEA values $<.05$.

Since in Model 4, gender was found to be a statistically significant predictor of self regulation with girls having better self regulation than boys, multiple group analysis was used to compare a fully constrained model with all paths in the girls model constrained to equal to all paths in the boys model to a fully unconstrained model . A Chi Square difference test was used to determine whether the overall girls model is significantly different from the overall boys model. The resulting Chi Square values were 101.23 (df=86) for the unconstrained model and 114.58 (df=75) for the fully constrained model where both measurement weights and structural path weights were constrained to be equal for boys and for girls. The Chi Square difference test

(13.35 difference in Chi Square values and 11 difference in degrees of freedom) resulted in an insignificant p value of .27, indicating that although there is a mean score difference between boys and girls self regulation, this difference does not significantly affect the impact of father-child humor on self regulation.

Table 4. *Results from Structural Equation Modeling with Child Self Regulation at Time 2 as Outcome and Family Conflict and Father-Child, Mother-Child, and Father-Mother Humor as Predictors (N=296 families).*

Variables	Mothers	Fathers	Daughters	Sons
	χ (SD)	χ (SD)	χ (SD)	χ (SD)
Family Conflict Time 1				
Conflict Problems	53.09 (9.37)	54.13 (9.71)	46.11 (10.57)	46.19 (10.91)
Couple Conflict	18.79 (4.05)	18.78 (4.35)	9.25 (3.80)	9.07 (3.74)
Father-Child Humor Time 1	-----	3.53 (1.42)	3.42 (1.25)	3.00 (1.56)
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Mother-Father Humor Time 1	4.80 (1.32)	5.02 (1.55)	-----	-----
Child Self Regulation Time 2	34.52 (6.01)	34.41 (5.75)	36.96 (6.03)	36.88 (5.91)
Child Self Regulation Time 1 (Control Variable)	34.36 (6.06)	-----	36.37 (6.12)	36.47 (5.46)

*p<.05, **p<.01, ***p<.001

CHAPTER 5

Discussion

The purpose of the current study was to examine both family conflict and family use of humor in one time as they relate to child self regulation one year later. In general, the hypothesis regarding family conflict and self regulation was supported, while hypotheses regarding relationships between humor and self regulation were partially supported. Furthermore, though the Mother-Child and Mother-Father Humor variables yielded insignificant results, contrasting these with the significant Father-Child Humor interaction provides important insight into family dynamics.

Family Conflict and Self Regulation

This study reaffirmed previous theoretical associations concerning the relationship between family conflict and child self regulation (see Cupach & Olson, 2006; Crockenberg & Langrock, 2001). As was hypothesized, family conflict was shown to be significantly negatively associated with children's self regulation. Moreover, this study provided longitudinal evidence for this association as it seems that conflict may indeed cause children to become less self regulated. This finding largely advances the literature regarding conflict and self regulation, as previous publications have been largely theoretical.

One possible framework for understanding this relationship can be derived from attachment theory. It may be that family conflict prevents parents from being fully present and emotionally available, possibly leading to insecure attachment. As children become insecurely attached, children are likely to engage in more emotion-driven interactions (e.g. anger or sadness) as an attempt to gain parent's attention. Furthermore, due to the heightened state of

arousal associated with conflict, parents may not comfort children in these states, thereby failing to model appropriate self regulation techniques. Thus, children of conflictual parents may be less likely overall to engage in self-regulatory behaviors.

This finding also ties into other research regarding conflict and child maladjustment. Family conflict has been shown to affect children in a number of ways, including increased child stress and increased child internalizing and externalizing behaviors (Rhoades, 2008; Cummings & Davies, 2002; Grych & Fincham, 1990). Thus, it is relatively unsurprising that conflict would also negatively affect children the form of self regulation. Moreover, as other theoretical models (e.g. Cummings, 1994) suggest that the presence of low self regulation may also lead to increased internalizing and externalizing problem behaviors, we may speculate that the conflict/self regulation association in this study also provides additional evidence for a conflict and child internalizing/externalizing behaviors relationship. However, as this study did not measure internalizing and externalizing behavior variables specifically, further research is needed to solidify this assumption.

Conflict, Family Humor, and Self Regulation

Along with examining conflict and self regulation, this study aimed to address the relationship between conflict, self regulation, and humor. It was found that father-child humor provides a moderating effect on the negative relationship between conflict and child self regulation while mother-father and mother-child humor do not moderate this relationship. Thus, we may expect that children who interact specifically with their fathers in a humorous way may be less negatively affected by family conflict. These interactional associations confirm the theoretical assumption that families strongly affect the development of child self regulation (Thompson & Meyer, 2007).

It may also confirm the importance of developing self regulation in children. Like Fuhr's 2002 study, these results may suggest that humor is a means of coping for children. If children who use or are exposed to humor have higher self regulation, humor may cause them to have a better ability to cope, and thus, to be more able to cope with the stresses of family conflict. Studies on self regulation may provide insight into other ways in which humor may help. Children who regulate emotion effectively may ruminate less about marital conflict than children who do not (Cummings & Keller, 2006). Moreover, self regulation skills may help children to appraise parental conflict more positively, which may help children avoid attempts at stopping parental conflict. It may be that humor provides similar benefits, as it seems to allow children to self regulate more effectively even in the midst of conflict. If true, humor may indeed promote overall psychological resilience (Thorson, Powell, Sarmany-Schuller, & Hampes, 1997).

Conceptualizing humor as a protective variable is consistent with other research which suggests that humor increases positive child outcomes (e.g. Cann & Calhoun, 2001; Yip & Martin, 2006; Peterson, 2007). Indeed, like the Giuliani, McRae, and Gross (2008) and Strick, Holland, van Baaren, & van Knippenberg (2009) studies, the finding that father-child humor is associated with self regulation provides further evidence for humor as a means to diminish negative feelings. Thus, in addition to individual, self-induced humor acting as a mood-elevator, natural relational humor may also have a similar effect when engaged in by fathers and their children.

The effect of father-child humor on conflict and self regulation may also suggest benefits beyond the scope of child outcomes. Like Brooks, Guthrie and Gaylord's 1999 study, two findings in this study confirm the notion that humor may benefit the family system at large. First, as father-child humor significantly influenced child self regulation, children with fathers

who use humor may have better outcomes overall than children of fathers who do not. As is hypothesized in other research, such positive outcomes may help the whole family to function more effectively (see Cui, Donnellan, & Conger, 2007; Hughes & Gullone, 2008).

Second, father-child humor was negatively associated with family conflict, which may mean that humor helps to diminish family conflict. This interaction is reaffirmed by findings in other research which suggest that humor may alleviate conflict in relationships (Campbell, Martin, & Ward, 2008; Norrick & Spitz, 2008; Butzer & Kuiper, 2008; Bippus, 2003; Odell, 1996). However, this study provides new evidence for family systems as a whole. Previous studies only examined couple relationships, and this study examines parent-child and couple relationships. However, previous findings found that couple humor lead to positive outcomes; in this study, father-child humor interactions affected child well-being whereas the effect of couple humor was nonsignificant. However, it may be that regardless of which forms of humor affect child self regulation, the family stands to benefit overall, as decreased child problems may also help to alleviate conflict (Hughes & Gullone, 2008).

Perhaps the most interesting finding, however, is that only father-child interactional humor was a significant predictor of child self regulation, while mother-child and mother-father humor were not. The partial confirmation of this family humor and child self regulation hypothesis begs some important questions. It may be that humor is more characteristic of husbands than of wives. This notion is supported by the earlier research of Ziv and Gadish (1989) which found a significant correlation between marital satisfaction and humor for husbands, but not for wives. This finding is interesting to contrast with the other gender-related finding in this study, that girls showed more self regulation than boys.

Developmental literature suggests that this difference between boys and girls may be a normal finding. Girls typically develop, physically and emotionally, sooner than boys, and thus it is likely that self regulation is part of this developmental process. Over time, we may expect that the self regulation reports would even out between girls and boys. However, in reference to humor, another process may be responsible. In context of humor being influential only in father-child interactions, it may be possible that humor may be another form of self regulation that is more characteristic of males, one that is not specifically addressed by self regulation measures, per se. If so, it may be that children's self regulation increases as a result of father humor because children are provided with a healthy model of self regulation (Thompson & Meyer, 2007). However, future research is required to provide evidence for this speculation.

The impact of father-child humor on child self regulation also highlights the importance of father-specific roles. It may be that humor is one characteristic that fathers specifically bring to the family system, one which provides important results for children. This finding provides preliminary evidence for the unique, positive impact that fathers may have on families. It is interesting to note this positive impact in contrast with the traditional disciplinarian view of fathers in two-parent families. This unique contribution of fathers suggests that two-parent family roles are likely more complex than previously thought (see Lewis & Lamb, 2003). It is likely that fathers are understudied as mothers influence seems to have more obvious effects on children (Lewis & Lamb, 2003). However, as is demonstrated in this study, fathers' roles are clearly an important topic of study. However, as our study only examined two-parent families, it will be important in future research to examine whether single parents duplicate positive child outcomes through humor.

In summary, these findings support the literature reviewed regarding potential mechanisms of family humor. First, the idea that humor diffuses family conflict by preventing the negative emotion escalation was partially supported by the moderating effect of father-child humor. Second, the notion of humor as a self regulation facilitator was supported by the association found between father-child humor and child self regulation. Additionally, given these findings, future studies may reveal evidence regarding humor and internalizing and externalizing symptomology as well as humor and healthy parent attachment.

Implications for Family Therapy

Because the outcomes in this study suggest that some types of humor beget positive outcomes, humor may be a viable therapeutic intervention. It is proposed that the introduction of humor in therapy may benefit families in a number of ways. Through assessment, therapist modeling, and humor-related interventions, couples and families may learn to function more effectively (Buckman, 1994; Schnarch, 1990).

Using humor in conjunction with therapy may help therapists to engage in more effective assessment and in-therapy interactions. Observing couple/family strengths, such as humor, in addition to deficiencies may help therapists select more personalized interventions. Additionally, it may be that couples/families who display humor may be more receptive to certain therapeutic techniques. Because humor may be indicative of higher self regulation, such families may be more able to handle difficult interventions, such as challenging. Families and couples may also benefit from therapist modeling of humor. Therapist display of humor may help to ease discomfort at the beginning of therapy, which may help clients become more comfortable. Furthermore, appropriate use of humor throughout the therapy process may appeal to those who are already prone to using humor. Therapists may also use appropriate humor to

cope with difficult interactions, thus promoting the use of humor as a means toward self regulation by demonstrating it themselves.

Finally, humor may benefit families through the use of humor-related interventions. Therapists may implement interventions which allow the family to engage through humor, or may encourage individuals to discover their own use of humor. Humor may allow families to break up negative interactions surrounding conflict (Odell, 1996; Madanes, 1987). Such interventions may allow families to focus on positive qualities and interactions rather than focusing on negative family functioning. Furthermore, parent demonstration of humor may increase trust and build parent-child relationships (Kilgore, 2003). Finally, outside-therapy interventions may allow families to engage in more positive interaction time, which may help to build relationship quality. It is noted, however, that future research regarding the effects of humor in family therapy is necessary to validate these assertions.

Humor interventions may especially be useful in the context of strategic, play therapy, and narrative modalities. By breaking up unproductive cycles, humor lends itself well as a strategic intervention (Odell, 1996; Madanes, 1987). Play therapy is also a prime modality for humor use, as humor promotes playful interactions for both adults and children. For children, humor in play therapy may increase therapeutic alliance and aid the developmental appropriateness of therapy (Kilgore, 2003). Adults may also benefit, as play therapy may increase couple relationship quality through playful humor interventions (see Casado-Kehoe, Vanderbleek, & Thanasiu, 2007; Schaefer, 2003). Additionally, humor in narrative family therapy may allow families to cope with difficult circumstances and access creative problem-solving resources (Freeman, Epston, & Lobovits, 1997).

Limitations and Future Research

Although this study provided important findings regarding the effect of humor on families, there are a few limitations to consider. One limitation is that the dyadic measurements of humor used in this study may not necessarily reflect how humor occurs naturally within a whole-family setting. Humor in this study was measured via observational coding of three two-person interactions (Mother-Child Humor, Father-Child Humor, and Mother-Father Humor). The advantage of this methodology is that each score reflects an interactional measure of humor. As humor largely occurs in relationship to others, a relational, observational measure may reflect humor more accurately than an individual questionnaire or interview format. However, because these scores are based on two-person rather than of entire-family interactions, the humor measured in this study may not necessarily reflect humor as it would occur if the entire family were observed together. Future research examining family dynamics as a whole would likely provide further insights into the effects of humor within the family.

Another limitation to consider is that, only two-parent families were examined, which limits the generalizability of the findings in this study. Though the comparison of single-parent to dual-parent families was not within the scope of this study, it will be important in future studies to note the similarities and differences between these families. It is possible that the father-child humor finding in this study does not mean that mothers do not employ humor which facilitates child self regulation; this may instead be a role that fathers fill within a two-parent family. Future research examining the relationship between humor, conflict, and child self regulation within single-parent families may provide important insight into how humor and parenting-roles might be related.

Two other limitations are related to the homogeneity of this sample. First, as only pre-adolescent and early adolescent children were examined in this study, these findings may not necessarily apply to children of other ages. For instance, it may be that as children grow older, parents' conflict may have less influence on self regulation as older children turn toward peer groups for support. Second, as this study was largely composed of Caucasian participants (86.4% of fathers, 82.8 percent of mothers, 81.3% of girls, and 79.5% of boys), further research is necessary to identify how humor affects families of other races and ethnic groups. For instance, it may be that the use of humor varies from culture to culture, and thus may not affect children in the same way. Future studies with less sample homogeneity may provide insight into these speculations.

In addition to research related to these limitations, this study also begets additional avenues for new research. One future direction may be to investigate other positive child outcomes. For instance, although poor self regulation and internalizing/externalizing problem behaviors are related (Calkins, 2004), studies regarding the effects of humor on internalizing and externalizing problem behaviors would likely reveal data more specific to these outcomes. Moreover, other child outcomes variables such as peer acceptance, school performance, and child stress might provide further insight into how humor affects child well-being. Addressing adult outcomes may also advance the findings in this study. Though family-wide benefits may be gleaned from decreased child problems, positive adult outcomes would solidify this assumption. Along this vein, it would be interesting to note whether or not the reverse of this study is true – it may be possible that decreased self regulation, both in children and adults, may lead to increased family conflict.

In addition to these suggestions, the identification of humor as a moderating variable between conflict and child self regulation will likely provide many other avenues for both research and therapeutic implementation. Though the interaction between these measures was only partially confirmed, the findings of this study as a whole suggest that humor is a variable worth further investigation, especially with regard to families. Family processes do indeed seem to affect child well-being, and thus, the further investigation into variables which aid family functioning is likely a valuable pursuit.

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APPENDIX

Iowa Interaction Rating Scales - Humor

HUMOR/LAUGH (HU)

This scale is designed to assess the degree to which the focal displays a sense of humor and makes statements primarily lighthearted in tone. Take the following behaviors into account: laughing or smiling frequently in an amused, pleasant, relaxed, noncynical, nonsarcastic manner (although some low-level humor could include good natured, mild sarcasm); the focal sees the light side of even serious issues and is able to get others to laugh or smile. Look for humor that decreases tension.

1 = Not at all characteristic: During the interaction, the focal displays no sense of humor or his/her attempts at humor are biting, hostile, or sarcastic and add to, rather than reduce, tension or interpersonal conflict. *Young children who use laughter inappropriately, e.g., to avoid parental directives, would not be scored as displaying evidence for humor.*

3 = Minimally characteristic: There is some evidence of low-intensity displays of humor (e.g., smiling/laughing) in a pleasant manner. The focal may display a sense of humor in response to other's comments, but is not the initiator of the laughter. Mild sarcasm or cynical humor presented in a lighthearted manner (clearly not intended to be insulting or discourteous to the other interactor or to other people) could score no higher than a '3'. When trying to decide if something is insulting or discourteous, consider whether or not the comment has a hostile edge. Nervous laughter could score no higher than a '3'. *Young children must display at least one instance of appropriate spontaneous laughter or appropriate laughter in response to the behaviors or comments of others.*

5 = Somewhat characteristic: There are several times during the interaction when the focal is able to lighten up the conversation, laughs good naturedly, or the focal is able to get others to laugh or smile with him/her at least once. In general, score a '5' only if there is at least one instance when another interactor smiles or laughs as a result of the focal's humor. *For young children, this may include "cute" or silly behaviors that appear aimed at entertaining the parent.*

7 = Moderately characteristic: The focal fairly often demonstrates humor of longer duration that often lightens the conversation. The focal must be able to elicit laughter from others through humor that is not sarcastic or demeaning of others.

9 = Mainly characteristic: The focal demonstrates a highly developed and active sense of humor. He or she actively elicits laughter from other interactors in a positive, nonsarcastic manner and laughs or smiles frequently throughout most of the interaction. To score a '9' no sarcastic comments can be present and the focal must elicit laughter from others at several points during the interaction. The overall effect of these humorous behaviors must be to reduce tension and make interactions more pleasant for the participants. *For young children, there should be no evidence of using humor and laughter inappropriately to distract parents from the task at hand.*

Clarifications: **Humor/Laugh**

1. Humor/Laugh includes "lighthearted comments" that appear intended to be funny or that bring out the more comical side of a conversation or situation. These remarks often tend to lighten or sidetrack a potentially heavy subject. They may provide perspective or reduce tension when difficult issues are being discussed or when the conversation "bogs down."

2. Joking and humorous comments delivered in a lighthearted manner, but made with some sarcasm, would be scored as low-level **Humor/Laugh** - '2' or '3'. Consider whether the comments lighten the atmosphere; do the others think it is funny? Especially when lighthearted sarcasm is used, responses can be a key in deciding if the comment is humor or should only be scored **Angry Coercion, Whine/Complain, Hostility, Contempt, Externalized Negative,** and/or **Antisocial**.

3. Humor or joking at another interactor's expense (i.e., ridiculing or making fun of someone) and mean-spirited (not light-hearted) humor would not be scored here, but rather under **Angry Coercion, Whine/Complain, Hostility, Contempt,** and/or **Antisocial**.

4. Sarcasm and humor that appear to be insulting or discourteous, even if delivered with a laugh, should not be coded under **Humor/Laugh**. Dark humor and antisocial humor are not counted as **Humor/Laugh** in this coding system.

5. There may be instances of just laughing, for no apparent reason, or the reason is not apparent to the observer (i.e., inside jokes, burps, etc.). Code a '2' if no one joins in the laughter. Other family members may or may not join in the laughter; if they join in, code the focal at the appropriate level.

6. Observe whether someone is laughing or giggling in an embarrassed, nervous, uneasy manner vs. the easy, relaxed laughter of good-natured joking. Nervous laughter indicative of tension, embarrassment, or anxiety should be scored '2' or '3' if lighthearted in nature. Poking fun at self, if lighthearted, could be scored a '2' or '3'; score higher if self-deprecating humor helps lighten the situation.

7. Chuckling, giggling, chortling, tittering, snickering, or laughing responses are scored under Humor/Laugh. These may be short bursts or prolonged.

8. If the focal laughs frequently and spontaneously throughout the task or frequently attempts to lighten the task, but no one laughs in response, a score of '5' is appropriate.

9. If a focal engages in antisocial behavior that gets self and the other interactor(s) to laugh (e.g., running around the room and playing with the camera, or joking about something antisocial in a light-hearted manner), code a '2' or '3' for the laughter, but no higher, if this is the only evidence.

10. In order to count smiling as evidence of Humor/Laugh it must be clear that such smiles demonstrate merriment or amusement. In general, look for amused smiling that accompanies laughter and/or light-hearted humorous statements. By itself, amused smiling would score no higher than a '2' or '3'.

11. Pay particular attention to physical affect (smiling) and tone of voice, as well as timing of behavior, when determining whether or not a behavior should be scored as Humor/Laugh.

12. Words that describe Humor/Laugh include:

blissful	fun	jocularly	mirth
blithe	gaiety	jolly	vivacity
buoyant	geniality	joviality	
cheerful	gleeful	merry	