Seismo

Conflict management in adult sibling relationships: Differences in interpersonal power, sibling influence, and conflict tactic use among sibling types

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Abstract

This study examined differences in conflict management-related perceptions and behaviors as a function of Gold's (1989) adult sibling types. Participants were 157 adults who reported on their relationship with a sibling by completing a series of self-report measures about themselves and the sibling administered in paper-and-pencil format. Results revealed that adult siblings who classified their relationship as intimate perceived more positive sibling interpersonal power and parallel sibling influence, and were more likely to use prosocial conflict tactics with their sibling during conflicts. Conversely, adult siblings who characterized their relationship as apathetic/hostile were more likely to desire differentiation and to use dysfunctional conflict tactics during conflict with their sibling. In addition, across sibling types, perceptions of siblings' power and influence predicted conflict tactic usage. This investigation extends available research by demonstrating destructive outcomes associated with the apathetic/hostile adult sibling type (e.g., increased use of violence as a conflict tactic). Further, across adult sibling types, this study provides insight into why emerging adult siblings use both constructive and destructive tactics during conflict with each other.

Key words

adult sibling types, conflict management, interpersonal power, sibling influence, conflict tactics

The sibling relationship is one of the most significant relationships for most people, often extending beyond familial obligation to personal choice and lasting throughout adulthood (Voorpostel & Van der Lippe, 2007). Adult sibling relationships represent a unique context for research, as they are often tested by geographical distance, infrequent contact, and complicated lives outside the sibling relationship (Rocca & Martin, 1998). However, little is known about adult siblings from a scholarly perspective, beyond attempts to identify various types of adult sibling relationships (Gold, 1989) and a few of their correlates, including commitment (Myers & Bryant, 2008) relational maintenance (Mikkelson, Myers, & Hannawa, 2011; Myers et al., 2001), and use of verbal aggression (Martin, Anderson, & Rocca, 2005). The current study extends available research on adult siblings by examining differences in interpersonal power, sibling influence, and conflict tactic use by adult sibling type. Results from this study will allow scholars to better understand the conflict-related perceptions and behaviors of adult siblings, the longest-lasting relationship in most individuals' lives (Pulakos, 1987).

1 Adult sibling relationship types

Various factors have been shown to impact sibling relationships and the communication that occurs therein, including size of sibling group, ordinal position of sibling, frequency of adult sibling interaction, and distance between adult siblings, as well as factors such as similarity, liking, and immediacy (Myers et al., 2001; Rocca & Martin, 1998). Some of these characteristics were combined with other variables by Gold (1989) to form general sibling relationship types, which themselves are predictive of communicative, affective, be-

havioral, and relational outcomes (Myers & Odenweller, 2015). Gold's (1989) typology of five major types of adult sibling relationships includes intimate, congenial, loyal, apathetic, and hostile siblings. Adult sibling relationships are classified as one of the five types based on a self-reported evaluation of the existence or absence of emotional and instrumental support, physical and psychological closeness, frequency and channel of contact, psychological involvement, approval, envy, and resentment (Gold, 1989). A growing body of research exists which utilizes Gold's (1989) typology to better understand how adult siblings communicate with and otherwise relate to each other (Myers, 2015). Specifically, family communication researchers have applied Gold's typology to the study of sibling affection (Myers, 2015), sibling relational maintenance behaviors (Myers & Goodboy, 2010), as well as relational characteristics and quality of sibling relationships (Myers & Odenweller, 2015). As a result of this body of work, Gold's has emerged as the typology of choice for scholars who seek to understand how identifiable differences in the characteristics of functional or dysfunctional sibling relationships are related to a host of relational behaviors and communication, which is the goal of this study.

Intimate siblings identify each other as "best friends." Gold (1989) noted that intimate sibling relationships are based upon strong, positive psychological closeness; these individuals prefer consistent and frequent contact. Even if separated by space and life changes, intimate sibling types remain interdependent and supportive of each other. When feelings of envy occasionally occur, intimate siblings express this emotion through admiration and praise as opposed to resentment or negative affect. Across the lifespan, intimate siblings are more likely to use prosocial relational maintenance behaviors such as assurances and conflict management than are congenial, loyal, apathetic, or hostile siblings (e.g., Myers & Goodboy, 2010; Myers & Odenweller, 2015). These individuals also demonstrate more affectionate communication (Myers, 2015) and report higher levels of commitment, communication satisfaction, and relational satisfaction (Myers & Odenweller, 2015).

Congenial sibling relationships are also characterized by support, approval, acceptance, and strongly positive psychological involvement with each other (Gold, 1989). However, congenial siblings consider themselves "good friends" and have inconsistent contact with each other. Although occasional disapproval or short-lived envy may occur, these experiences are not severe nor are they detrimental to the integrity of the relationship. Adults in congenial sibling relationships report greater use of a variety of prosocial relational maintenance behaviors (e.g., conflict management) as compared to loyal or apathetic/hostile sibling types (Goodboy, Myers, & Patterson, 2009; Myers & Goodboy, 2010; Myers & Odenweller, 2015). Similarly, congenial siblings use affectionate communication at a higher rate (Myers, 2015) than those who identify as loyal or apathetic/hostile siblings (Myers & Goodboy, 2010).

Loyal siblings experience a strong familial bond, but they provide support less often than siblings in congenial or intimate relationships and lack personal involvement with each other's lives (Gold, 1989). Acceptance and approval are less consistent in a loyal sibling relationship, but negative feelings of disapproval will be put aside during times of family crisis when sibling ties feel strongest. Loyal siblings experience a minor degree of envy and resentment, most of which originates from childhood jealousy or rivalry. Loyal siblings epitomize a "blood is thicker than water" bond (Gold, 1989, p. 44). Following a progression through the sibling types, those in loyal sibling relationships use prosocial relational maintenance behaviors (Myers & Goodboy, 2010; Myers & Odenweller, 2015) and affectionate communication (Myers, 2015) to a higher degree than apathetic/hostile siblings, but not as often as intimate or congenial siblings.

While intimate, congenial, and loyal siblings generally demonstrate various degrees of positive sibling interactions and experiences, other sibling relationships

are characterized by negative or destructive elements (Gold, 1989; Rocca & Martin, 1998). Apathetic siblings evince little emotional connection; instead, indifference, minimal contact, and the absence of support are characteristic of apathetic siblings (Gold, 1989). Individuals who identify as apathetic appear comfortable with a lack of involvement or contact with their sibling. Lastly, hostile siblings openly resent each other (Gold, 1989). Sibling envy, rivalry, and jealousy are prevalent, and hostile siblings reject all forms of support from each other and experience strong disapproval for all aspects of their siblings' lives (e.g., child-rearing methods, occupation). Hostile siblings have a strongly negative psychological involvement with each other which is manifested via negative affect, envy, and aggression. As compared to the other sibling types, apathetic and hostile siblings have more negative sibling interactions, or little to no sibling interaction.

Across available studies, apathetic and hostile siblings are the least commonly reported sibling types (e.g., Gold, 1989; Myers, 2015; Myers & Goodboy, 2010; Myers & Odenweller, 2015). As compared with the more positive sibling types (particularly intimate siblings), apathetic and hostile siblings employ fewer constructive relational maintenance behaviors and less affectionate communication, which negatively impacts relational quality. The current study extends the body of research about how sibling types influence perceptions and communication in adult sibling relationships by examining the adult sibling typology (Gold, 1989) in the context of conflict management-related perceptions and behaviors in the adult sibling relationship, with an eye toward uncovering potential differences in interpersonal power, sibling influence, and conflict tactic use by adult sibling type.

2   Conflict perceptions and tactic use

Conflict is an inevitable part of all human relationships (Strauss, 1979). Sibling conflict is unique and often especially intense, in part because siblings share a particular-ly high level of familiarity with and knowledge of each other during their complex, long-term relationship (Bedford, Volling, & Avioli, 2000; Lindell, Campione-Barr, & Greer, 2014; Raffaelli, 1992). Based on how it is managed, conflict can be either beneficial (e.g., promoting social and psychological growth) or damaging (Howe, Rinaldi, Jennings, & Petrakos, 2002; Scrimgeour, Mariotti, & Blandon, 2016). In young adult sibling relationships, conflict is typically managed through negotiation and coercion opposed to avoidance (Laursen, Finkelstein, & Betts, 2001), which is more common in adolescent sibling relationships (Raffaelli, 1992). Many factors influence the ways in which conflict is managed in sibling relationships, including power and influence perceptions (Abuhatoum & Howe, 2013; Perlman, Garfinkel, & Turrell, 2007; Raffaelli, 1992).

2.1 Power

A key determinant of conflict in sibling relationships, as in all relationships, is often an unequal distribution of power (Bedford et al., 2000). Interpersonal power is conceptualized as multidimensional in nature, stemming from an individual's perceived ability to regulate the rewards and costs of a close other and often includes perceptions of the individual's credibility and competence (Garrison & Pate, 1977). Perceptions of a close other's power – particularly, perceptions that the other is more powerful – are frequently identified as causes of conflict and negative affect in close relationships (Keltner, Gruenfeld, & Anderson, 1993).

Positive assessments of power include the perception that an individual is powerful, has a great deal of influence over one's life, is credible and competent, and is a leader (Garrison & Pate, 1977). The perception of positive personal power has been related to such constructive outcomes as positive affect (Keltner et al., 2003) and improved problem-solving as well as increased relational satisfaction in adolescent romantic couples (Bentley, Galliher, & Ferguson, 2007). Conversely, when an individual perceives another as lacking in some aspects of power (i.e., little

to no sanction to reward/punish, perceptions of little to no competence, etc.), the individual evaluates the other as having negative personal power (Garrison & Pate, 1977). Negative personal power is associated with negative outcomes such as increased feelings of potential threat and punishment resulting in negative affect toward the relationship.

Although the adult sibling typology has not been studied in conjunction with interpersonal power perceptions, it seems obvious that such a connection exists. As indicated previously, intimate siblings are the most psychologically connected and interdependent of all sibling types. As such, individuals in intimate sibling relationships should identify high levels of perceived power, and given intensely positive nature of these relationships, these power perceptions should be positive in nature. Conversely, those in sibling relationships that thrive on indifference, independence, and resentment should perceive more negative sibling power. Formally:

H1a: Individuals who classify their sibling type as intimate will report greater perceptions of their adult siblings' positive interpersonal power than those siblings who classify their relationships as congenial, loyal, apathetic, or hostile.

H1b: Individuals who classify their sibling type as apathetic or hostile will report greater perceptions of their adult siblings' negative interpersonal power than those siblings who classify their adult sibling relationship as intimate, congenial, or loyal.

2.2 Sibling influence

Due to the uniqueness of the sibling relationship, the foundations of power move beyond dependence on an individual or the perceived level of rewards or punishments an individual can enforce. Social learning theorists explain that we learn behaviors in part through other's experiences (Bandura, 1977). Sibling relationships provide an informative context in which to study these influences from a young age, as siblings are a central factor in each other's lives (Whiteman & Christiansen,

2008). Through social learning, siblings can influence each other in the development of conflict-related behaviors such as perspective-taking, negotiation, and problem-solving skills (Howe et al., 2002).

Whiteman and colleagues have found that sibling influence manifests in two distinct ways: parallel (likeness to sibling) and differentiation (variation from sibling) (2007a, 2007b). Parallel sibling influence includes the desire to behave like one's sibling, engage in the same activities as one's sibling, and be included by that sibling (Whiteman, Bernard, & McHale, 2010). Siblings may develop behavioral similarities when older siblings model behaviors for younger siblings (Perlman et al., 2007; Whiteman, McHale, & Crouter, 2007b). On the other hand, siblings may instead de-identify or actively create social distance between themselves and their sibling (Whiteman & Christiansen, 2008; Whiteman, McHale, & Crouter, 2007a). Differentiation can be a way in which to manage competition or rivalry, and has also been linked to greater differences in siblings' individual communication characteristics (Whiteman et al., 2010).

Although sibling influence, per se, has not been studied in association with sibling types or power perceptions, the relationship between power and influence suggests similar associations (Abuhatoum & Howe, 2013; Perlman et al., 2007). Specifically, the highly positive nature of intimate sibling types, including the elevated feelings of liking/loving (Myers & Odenweller, 2015), should encourage perceptions of more positive sibling influence (i.e., parallel influence) and the desire to be more like one's sibling. Conversely, the relatively negative nature of apathetic and hostile sibling types, including the indifference or overt hatred experienced by these two forms (Gold, 1989), should lead to perceptions of more negative sibling influence (i.e., differentiation) and the desire to be perceived as different from one's sibling. Formally:

H2a: Individuals who classify their adult sibling relationship as intimate will report greater positive sibling influence

(i.e., parallel influence) than those siblings who classify their adult sibling relationship as congenial, loyal, apathetic, or hostile.

H2b: Individuals who classify their adult sibling relationship as apathetic or hostile will report greater negative sibling influence (i.e., differentiation) than those siblings who classify their adult sibling relationships as intimate, congenial, or loyal.

2.3 Conflict tactics

Although the impact of conflict in adult sibling relationships has yet to be thoroughly investigated, sibling conflict behaviors have been examined at various points across the lifespan. For example, siblings as young as two years old engage in basic conflict management strategies such as denying, rejecting, and contradicting others (Abuhatoum & Howe, 2013). As children age (i.e., 6–9 year olds), their conflict strategies adapt and become more complex, involving reasoning, justifications, and explanations (Abuhatoum & Howe, 2013). As adolescents become adults, their conflict style changes and adapts again.

Common ways to manage conflict in the family context include verbal aggression, physical aggression, and reasoning (Straus, 1979). Verbal aggression is the act of symbolically hurting or threatening to hurt another and may cause more severe outcomes than physical aggression (Stet, 1990). In the study of conflict management, verbal aggression includes verbal and nonverbal psychological harm or abuse of another (i.e., insults, threats, sulking, being distant; Derrick, Testa, & Leonard, 2014). Physical aggression refers to an act of physical force causing harm of any kind against another (Stet, 1990). While conceptually distinct, verbal aggression is consistently positively correlated with physical aggression (Stet, 1990), and both result in numerous negative outcomes (e.g., poor relational functioning and lack of open communication) across varying relationship types (Derrick et al., 2014).

Reasoning, the most prosocial of the conflict management tactics, involves a more intellectual approach to handling conflict (Straus, 1979). Managing conflict through reasoning engages rational discussion, productive argument, and logic and typically results in positive consequences (Straus, 1979). Again, although conflict tactics have not been studied in relation to the adult sibling types, intimate siblings' general pattern of engaging in more constructive behaviors (Gold, 1989; Goodboy et al., 2009) suggests that they may use more reasoning during conflicts with their siblings. On the other hand, extant research identifies verbal and physical aggression as antisocial conflict management tactics resulting in various harmful consequences (Stet, 1990). As such, apathetic and hostile siblings should be more likely to employ these destructive conflict tactics, given their general pattern of engaging in antisocial behaviors with each other (Myers, 2015; Myers & Goodboy, 2010). Formally:

H3a: Individuals who classify their adult sibling relationship as intimate will report using more positive conflict management tactics (i.e., reasoning) than those siblings who classify their sibling relationships as congenial, loyal, apathetic, or hostile.

H3b: Individuals who classify their adult sibling relationship as apathetic or hostile will report using more destructive conflict management tactics (i.e., verbal aggression and physical aggression) than those siblings who classify their adult sibling relationships as intimate, congenial, or loyal.

3 Method

3.1 Participants and procedures

Participants were 157 individuals (69 men, 88 women) who ranged in age from 19 to 55 years ($M=21.59$, $SD=4.20$) who were recruited from undergraduate courses at West Virginia University. College students with at least one sibling comprised the target population due to the changing relationship of adult siblings upon leaving home for college, providing an interesting

period of change that siblings must navigate (Mikkelson et al., 2011). Seventy-seven participants reported on male siblings and 79 participants reported on female siblings. One participant did not report sibling sex. The average age of the sibling reported on by participants was 21.92 years ($SD = 5.48$) and most participants (87.9%) were Caucasian. Participants reported being geographically separated from their sibling by an average of 457.24 miles ($SD = 1593.75$). All participants identified themselves and their sibling as unmarried, and all participants reported on a full biological sibling.

Following procedures established in related research (e.g., Myers & Odenweller, 2015), participants were asked to think about a sibling whose birthday was closest to their own and who was at least 16 years of age, and then to complete a series of self-report scales (administered via paper-and-pencil format) in reference to that sibling. The wording of these measures was adapted to refer specifically to siblings.

3.2 Instrumentation
Interpersonal power
The Measure of Interpersonal Power (Garrison & Pate, 1977) is a 12-item multidimensional scale measuring the participants' perception of their siblings' power in their relationship. This instrument asks participants to indicate on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) their level of agreement with 6 statements regarding the sibling's positive personal power (e.g., "I find my sibling to be a very persuasive person"), 4 statements referencing negative personal power (e.g., "My sibling is unable to make decisions and initiate action"), and 2 items related to reward power (e.g., "My sibling is able to reward others"). Due to concerns regarding the instability of the scale (Garrison & Pate, 1977), the original authors recommended additional testing of the measure. As such, a first-order confirmatory factor analysis (CFA, AMOS 22) was used to examine the three-dimensional nature of interpersonal power. Results from this analysis indicated poor fit of the three-factor

model ($\chi^2/df = 1.97$, CFI = .93, RMSEA = .08, PRATIO = .65). Closer inspection of the measurement coefficients revealed that one of the reward power items had a very small loading (i.e., .12, "My sibling can't reward others"). Removal of this item necessitated the removal of the reward power dimension entirely, as a minimum of two indicators per factor is required for CFA. This deletion significantly improved model fit ($\chi^2/df = 1.60$, CFI = .96, RMSEA = .06, PRATIO = .62) and indicated the appropriateness of the positive ($\alpha = .81$, $M = 4.61$, $SD = 1.08$) and negative ($\alpha = .82$, $M = 5.42$, $SD = 1.12$) power subscales for use in subsequent analyses.

Sibling influence
Sibling influence was assessed using Whiteman, Bernard, and McHale's (2010) two-dimensional Sibling Influence Scale. This 18-item scale asks participants to indicate on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) their level of agreement with statements regarding how much the participant tries to be different from his/her sibling (i.e., differentiation, 10 items, e.g., "I live my life differently so I won't be like my sibling") and the extent to which his/her sibling sets an example for the participant or overtly tries to influence the participant (i.e., parallel sibling influence, 8 items, e.g., "My sibling tells me how I should behave in a particular situation"). A first-order CFA was employed to assess the two-dimensional nature of the sibling influence scale. Initial results indicated poor fit to the data ($\chi^2/df = 3.35$, CFI = .92, RMSEA = .11, PRATIO = .78). Examination of the measurement coefficients revealed that one of the differentiation items had a very small loading (i.e., .19, "I've learned from my sibling's mistakes"). Removal of this item significantly improved model fit ($\chi^2/df = 2.87$, CFI = .96, RMSEA = .07, PRATIO = .64) and revealed the appropriateness of employing the 8-item parallel sibling influence ($\alpha = .88$, $M = 3.34$, $SD = .78$) and 9-item differentiation ($\alpha = .87$, $M = 2.76$, $SD = .78$) scales in subsequent analyses.

4.3 Conflict management tactics

The use of particular conflict management behaviors was measured with 17 items[1] from the Conflict Tactics Scale (Straus, 1979) which assesses the use of one's own reasoning, verbal aggression, and physical aggression. Participants were asked to reflect on their use of these behaviors with their sibling over the past six months, and to respond on a 6-point Likert scale (1 = never happened, 6 = definitely happened). A first-order CFA was employed to assess the three-dimensional nature of the conflict tactics scale. Initial results indicated poor fit to the data ($\chi^2/df = 5.12$, CFI = .77, RMSEA = .16, PRATIO = .76). Examination of the measurement coefficients revealed that two of the physical aggression items did not load strongly onto the latent variable (i.e., .17, "Threatened my sibling with a gun or knife," and .19, "Used a knife or gun"). As opposed to the other physical aggression items, these two items entail a particularly high level of potentially life-threatening violence. Further, the strong correlation between these two items ($r = .93$) suggests their consistency with each other, and the possible presence of a fourth dimension. Indeed, a first-order CFA of a four-factor measure (including these two items as a separate "violence" factor) revealed good fit ($\chi^2/df = 3.12$, CFI = .96, RMSEA = .07, PRATIO = .66). Thus, the 3-item reasoning ($\alpha = .70$, $M = 3.90$, $SD = 1.03$), 4-item verbal aggression ($\alpha = .78$, $M = 3.43$, $SD = 1.13$), 8-item physical aggression ($\alpha = .96$, $M = 2.35$, $SD = 1.30$), and 2-item violence ($\alpha = .96$, $M = 1.71$, $SD = 1.31$) scales were tested separately in subsequent analyses.

Sibling typology

Sibling type was assessed using descriptions representing the five adult sibling types taken from previous research utilizing Gold's (1989) typology (Myers & Odenweller, 2015). Participants selected the description that best fit their relationship with the sibling they had been reporting on. Most participants identified their sibling type as congenial ($n = 59$), intimate ($n = 52$), or loyal ($n = 33$), with far fewer participants identifying their sibling type as apathetic ($n = 9$) or hostile ($n = 4$). Following past research (e.g., Myers & Odenweller, 2015), the small number of participants who identified their sibling type as apathetic or hostile prompted the decision to collapse these two types into one category for subsequent analyses.[2]

4 Results

4.1 Preliminary analyses

Past research has shown that variables such as sex and geographic distance between siblings impact whether siblings maintain emotional and behavioral contact with each other as adults (e.g., Lee, Mancini, & Maxwell, 1990; Pulakos, 1987). As such, significant differences in the outcomes of interest in this study as a result of these variables, and as a result of age, were examined. The results of independent samples *t*-tests revealed significant differences between male and female participants in all of the following: perceptions of siblings' negative personal power ($t(153) = -4.11$, $p < .01$), desire to differentiate from their sibling ($t(153) = 2.73$, $p < .01$), and use of physical aggression ($t(148) = 3.44$, $p < .01$) and violence ($t(154) = 3.93$, $p < .01$) during sibling conflict. In every instance except one (i.e., perceptions of siblings' negative personal power), males scored higher on these dependent variables than females did. Another series of independent samples *t*-tests revealed no significant differences based on sibling sex. The possible influence of distance and age on the outcomes of interest in this study were assessed via Pearson correlations. These analyses indicated no significant differences between geographic distance

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1 Following Straus' (1990) suggestion, "I cried" was excluded from the original scale.

2 The low number of apathetic and hostile siblings is quite consistent with past research. In fact, all published research with this typology has collapsed these two sibling types for data analysis (e.g., Myers, 2015; Myers & Goodboy, 2010; Myers & Odenweller, 2015) due to having very few participants who self-identify as either sibling type.

or participant age and any of the dependent variables in this study. Collectively, the results of these preliminary analyses recommend only the inclusion of participant sex (dummy coded) as a covariate in subsequent analyses when examining interpersonal power, sibling influence, and conflict tactics.

4.2 Hypotheses testing

Correlations among all study variables can be found in Table 1. Hypothesis 1a predicted that individuals who classify their sibling type as intimate would report increased perceptions of their adult siblings' positive interpersonal power as compared to the other sibling types, while H1b posited that individuals who classify their sibling type as apathetic/hostile would report increased perceptions of their adult siblings' negative interpersonal power as compared with the other sibling types. The results of a multivariate analysis of covariance (MANCOVA) indicated significant differences in the dimensions of interpersonal power by sibling type, Wilks' $\Delta = .76$, $F(6, 288) = 7.19$, $p < .001$, partial $\eta^2 = .13$. Univariate effects were significant for individuals' perceptions of their siblings' positive personal power, $F(3, 145) = 13.63$, $p < .001$, partial $\eta^2 = .22$, but not for individuals' perceptions of siblings' negative personal power, $F(3, 145) = 2.72$, $p = .06$ partial $\eta^2 = .05$. Follow-up Bonferroni comparisons[3] revealed that individuals who classified their sibling type as intimate ($M = 5.30$, $SD = .82$) perceive their sibling as having significantly more positive personal power than individuals who classify their relationship as congenial ($M = 4.54$, $SD = 1.04$), loyal ($M = 4.03$, $SD = .83$), or apathetic/hostile ($M = 4.15$, $SD = 1.10$). Thus, H1a was supported, but H1b was not supported.

Hypothesis 2a predicted that individuals who classify their sibling type as intimate would report elevated perceptions of the parallel influence of their adult siblings as compared to the other sibling types, while H2b posited that individuals who classify their sibling type as apathet-ic/hostile would report increased perceptions of differentiation from their adult siblings as compared with the other sibling types. MANCOVA findings indicated significant differences in the two dimensions of sibling influence by sibling type, Wilks' $\Delta = .72$, $F(6, 290) = 8.55$, $p < .001$, partial $\eta^2 = .15$. Univariate effects were significant for both parallel sibling influence, $F(3, 146) = 11.94$, $p < .001$, partial $\eta^2 = .20$, and differentiation, $F(3, 146) = 6.69$, $p < .001$, partial $\eta^2 = .12$. Follow-up Bonferroni comparisons revealed that individuals who classified their sibling type as intimate ($M = 3.82$, $SD = .79$) perceive more parallel influence from their sibling than individuals who classify their relationship as congenial ($M = 3.29$, $SD = .63$), loyal ($M = 2.87$, $SD = .61$), or apathetic/hostile ($M = 3.02$, $SD = .79$). Further, Bonferroni comparisons also indicated that individuals who classify their sibling type as apathetic/hostile ($M = 3.56$, $SD = .55$) were significantly more likely than those who classify their relationship as intimate ($M = 2.52$, $SD = .81$) or congenial ($M = 2.70$, $SD = .76$) to report that their siblings' behavior influenced them to differentiate themselves from that sibling. Contrary to expectations, apathetic/hostile siblings did not differ from loyal siblings ($M = 2.92$, $SD = .62$) in their reports of differentiation (although this difference did approach statistical significance, $p = .06$). Thus, H2a was fully supported and H2b was partially supported.

Hypothesis 3a predicted that individuals who classify their sibling type as intimate would report the use of more constructive conflict management tactics (i.e., reasoning) as compared to the other sibling types, and H3b postulated that individuals who classify their sibling type as apathetic/hostile would report the use of more destructive conflict management tactics (i.e., verbal aggression, physical aggression, and violence) as compared to the other sibling types. MANCOVA findings indicated significant differences in the use of conflict tactics by sibling type, Wilks' $\Delta = .79$, $F(12, 365) = 2.80$, $p < .001$, partial $\eta^2 = .08$. Univariate effects, however, were significant only for reasoning, $F(3, 141) = 5.72$, $p < .001$, partial $\eta^2 = .11$, and

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3   The significance level for all Bonferroni comparisons was $p < .05$.

Table 1:   Correlation Matrix for Study Variables

Variable	IP Power: Positive Personal	IP Power: Negative Personal	Sibling Influence: Parallel	Sibling Influence: Differentiation	Conflict Tactics: Reasoning	Conflict Tactics: Verbal Aggression	Conflict Tactics: Physical Aggression
IP Power: Negative Personal	.21**	–					
Sibling Influence: Parallel	.64**	.26**	–				
Sibling Influence: Differentiation	−.17*	−.53**	−.19*	–			
Conflict Tactics: Reasoning	.23**	.13	.30**	−.19*	–		
Conflict Tactics: Verbal Aggression	−.06	−.22**	−.13	.35**	.05	–	
Conflict Tactics: Physical Aggression	.01	−.44**	−.08	.35**	−.04	.56**	–
Conflict Tactics: Violence	.08	−.65**	.02	.38**	−.04	.25**	.61**

Note: * Indicates significance at $p < .05$. ** Indicates significance at $p < .01$.

violence, $F(3, 141) = 3.34$, $p < .05$, partial $\eta^2 = .07$. Follow-up Bonferroni comparisons revealed that individuals who classify their sibling type as intimate ($M = 4.41$, $SD = .96$) reported significantly more reasoning during conflicts with their sibling over the six months preceding the study than congenial ($M = 3.78$, $SD = .95$), loyal ($M = 3.51$, $SD = .99$) or apathetic/hostile ($M = 3.41$, $SD = 1.00$) siblings. Further, Bonferroni comparisons also indicated that individuals who classify their sibling type as apathetic/hostile ($M = 2.62$, $SD = 1.43$) reported the use of significantly more violence during conflicts with their siblings in the six months preceding the study than intimate ($M = 1.64$, $SD = 1.30$), congenial ($M = 1.62$, $SD = 1.27$), or loyal ($M = 1.61$, $SD = 1.27$) siblings. Thus, H3a was fully supported and H3b was partially supported.

4.3 Supplemental analyses

Although not originally proposed, the significant correlations among the dependent variables and the nature of those associations suggest the possibility that power and influence perceptions impact both each other and conflict tactic use between adult siblings. Specifically, the relatively "positive" perceptual and behavioral outcomes are all positively correlated (i.e., positive power and parallel sibling influence, positive power and reasoning, parallel sibling influence and reasoning; see Table 1). These findings suggest a potential pattern whereby positive power perceptions impact parallel influence per-

ceptions (note that these correlations are particularly strong), which in turn predict the use of reasoning during sibling conflict. A path model (AMOS 22) was used to explore this possibility. Guidelines for model fit included comparative fit indices (CFI) close to .95, root mean square errors of approximation (RMSEA) at or below .06, and chi-square/degrees of freedom ratios less than three (Hu & Bentler, 1999; Iacobucci, 2010). The model displayed good fit to the data, $\chi^2/df = 1.49$, CFI $= .99$, RMSEA $= .01$, and all path coefficients were significant (Figure 1).

The comparatively more "negative" outcomes investigated here demonstrated a pattern wherein negative power was inversely related to the use of the destructive conflict tactics (i.e., verbal aggression, physical aggression, and violence), while differentiation was positively associated with these tactics, and negative power and differentiation were inversely related (see Table 1). As such, multiple regressions were used to further examine the extent to which (and how) power and influence perceptions might predict the use of destructive conflict tactics. The results of these analyses indicated significant models in the case of all three conflict tactics: verbal aggression ($F (2, 145) = 10.28$, $p < .001$), physical aggression ($F (2, 144) = 18.35$, $p < .001$), and violence ($F (2, 150) = 53.96$, $p < .001$). However, further inspection of the results revealed that only differentiation significantly predicted verbal aggression ($\beta = .32$, $t = 3.50$, $p < .01$), whereas only

Figure 1:   "Positive" path model
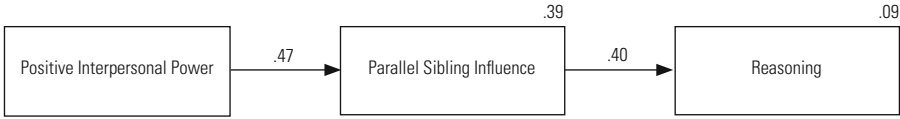
Note: All parameter estimates are significant at *p* < .01. Maximum likelihood estimation was used. The numbers at the top right of the parallel sibling influence and reasoning variables represent the squared multiple correlation of their associated predictors. For visual simplicity, the error terms are excluded from the graphical model.

negative power perceptions significantly (and negatively) predicted both physical aggression ($\beta = -.35$, $t = -3.95$, $p < .001$) and violence ($\beta = -.62$, $t = -8.42$, $p < .001$).

5   Discussion

The purpose of this study was to examine differences in conflict management-related perceptions and communication (i.e., interpersonal power, sibling influence, and conflict tactic usage) by adult sibling type (Gold, 1989). Findings indicate that those in intimate sibling relationships perceived their adult siblings as having more positive interpersonal power and more parallel sibling influence. Intimate siblings also reported engaging in the more prosocial conflict tactic of reasoning (as opposed to verbal aggression, physical aggression, or violence) during conflict with their sibling in the six months prior to the study. Conversely, those in apathetic/ hostile sibling relationships were more likely to report that their sibling's behavior encouraged them to differentiate themselves from that sibling, and were more likely to report resorting to violence during recent conflicts with their sibling. Overall, the findings suggest that intimate adult siblings have more positive perceptions and use more effective conflict communication behaviors in their relationship than any other sibling type, while apathetic/hostile adult siblings evidence more negative perceptions and destructive conflict behaviors. These findings are generally consistent with extant research regarding sibling types (e.g., Myers, 2015; Myers & Odenweller, 2015), but extend what is known about the adult sibling typology to a class of previously unexamined conflict management-related perceptions and communication. Further, these results may apply outside the sibling context, as sibling conflict management tactics are associated with the ability to manage conflict with people besides one's sibling, such as romantic partners and friends (Greer, Campione-Barr, Debrown, & Maupin, 2014; Tippett & Wolke, 2015).

Available research shows that intimate and older adult congenial sibling types are more likely to use conflict management specifically as a strategy to maintain their relationship (Myers, 2015); however, conflict-related perceptions and conflict tactics have not previously been the focus of investigations of the variations in perceptual and communicative outcomes by sibling type. A host of prior research has revealed numerous positive outcomes associated with the intimate adult sibling type, including increased trust, liking, loving, and communication/ relational satisfaction, (Myers & Odenweller, 2015); the use of prosocial relational maintenance behaviors such as assurances and positivity (e.g., Myers & Goodboy, 2010); and increased expression of affection (Myers, 2015). The findings from this study expand what is known about the intimate sibling type, indicating that these individuals also have positive perceptions of their adult siblings' power and influence, and demonstrate increased likelihood of using the more constructive and prosocial conflict tactic of reasoning during conflicts with their adult siblings.

Perhaps more important, however, are the conclusions from this study regarding apathetic/hostile siblings and their conflict-related perceptions and behaviors. As scholars of adult sibling communica-

tion have concluded, verbal aggression is one of only three major lines of research in the adult sibling communication context (Myers & Kennedy-Lightsey, 2015), and it represents the only line of inquiry pertaining to conflict. Additionally, given the lack of scholarship focused on this particular area, these same scholars have called for future research on the dark side of adult sibling communication, including "the communicative characteristics of dysfunctional sibling relationships" (Myers & Kennedy-Lightsey, 2015, p. 230). Conflict, per se, is not necessarily a dark side issue (Flora & Segrin, 2015), yet data from the current study reveal the use of violence during conflict by apathetic/hostile adult siblings, a strategy that would certainly be characterized as dysfunctional. This clearly represents an extreme type of conflict tactic that should result in particularly deleterious effects for the adult sibling relationship, and may be at the root of the lower satisfaction and relational quality that has been reported by apathetic/hostile siblings (Myers & Odenweller, 2015). Further, the supplemental analyses indicated that perceptions of a sibling's negative power were strongly predictive of the use of violence during adult sibling conflicts, suggesting that these negative power perceptions are a particular reason why apathetic/hostile individuals use dysfunctional, dangerous conflict tactics.

As noted by Myers and Kennedy-Lightsey (2015), investigating the specific factors that provide a catalyst for adult siblings to engage in dark side communication would be a useful avenue for future research. Across sibling types, the supplemental analyses from this study point to some of the reasons why adult siblings engage in both constructive (i.e., reasoning) and destructive (i.e., verbal aggression, physical aggression, and violence) conflict with each other, revealing that power and influence factors are related to the choice of tactic in adult sibling conflict. Positive power perceptions are closely associated with parallel sibling influence perceptions, which in turn predict the use of reasoning during sibling conflict. Further, differentiation predicts the

use of verbal aggression, whereas negative power perceptions predict the use of both physical aggression and violence during sibling conflict. Across adult sibling types, findings from the supplemental analyses contribute to extant literature by providing some explanatory mechanisms for the use of specific conflict tactics in emerging adult siblings.

Although the findings from this study expand what is known about adult sibling types in the context of conflict by identifying some particularly destructive conflict behaviors that are undertaken by apathetic/hostile siblings, and some general reasons underlying the choice of both constructive and destructive conflict tactics, the results should be interpreted in light of the limitations that were present. The first limitation is the focus of the study on only one of the individuals in the adult sibling relationship. Although the perspective of only one sibling is utilized in the vast majority of sibling research (Bedford et al., 2000; Rocca & Martin, 1998; Voorpostel & Van der Lippe, 2007), this methodological decision rendered us unable to ascertain a complete picture of conflict in the sibling relationship. Future research would benefit from a dyadic approach which entails the perspective of more than one sibling. A second limitation is the homogenous sample of full biological siblings. Future research may want to consider sampling techniques that include sibling relationships that extend beyond full biological siblings including step siblings, half siblings, and adopted siblings (Mikkelson, Myers, & Hannawa, 2011), particularly as scholars have called for research that can help determine how genetic relatedness impacts sibling communication (Myers & Kennedy-Lightsey, 2015). A third limitation of the study is that a typology initially created for older adult siblings was used in the context of younger/emerging adult siblings. Although other scholars have applied Gold's (1989) typology to samples similar in age to that investigated in the current study (Myers & Odenweller, 2015), others note the importance of examining family conflict during middle age and following retirement (Flora & Segrin, 2015).

A final, yet important, limitation is the inability of this study to assess the degree to which the sociocultural context in which these siblings were socialized influenced their perceptions and behaviors. Of course, the processes investigated here do not occur in a vacuum – from childhood on, siblings' development is strongly influenced by the culture in which they are socialized (e.g., Montgomery, 2008). As Bronfenbrenner's (1979, 1986) ecological systems theory notes, family relationships are impacted by the larger societal context, including cultural forces (i.e., the macrosystem). For instance, siblings socialized in individualistic cultures display certain characteristics (e.g., sibling rivalry) that are not a prominent feature of sibling relationships in communal cultures (Nuckolls, 1993). Additionally, some studies have shown a link between lower socioeconomic status and more negative sibling relationships (e.g., Dunn, Slomkowski, & Beardsall, 1994). Likewise, geographical distance is a factor in contact between siblings (Connidis & Campbell, 1995). In short, the sociocultural context may influence adult siblings' perceptions and behaviors. Where possible, we attempted to account for such influences here (e.g., proximity), but future research would benefit from a more thorough consideration of sociocultural influences on adult sibling perceptions and behaviors.

In sum, the findings of this study show that type of sibling relationship (i.e., intimate, congenial, loyal, and apathetic/hostile) influences not only the perceived power and influence of siblings, but also how siblings communicate during conflict in emerging adulthood. This study extends what is currently known regarding the perceptual and communicative outcomes associated with the adult sibling types by revealing additional positive outcomes of the intimate adult sibling type (i.e., perceptions of positive sibling interpersonal power, perceptions of parallel sibling influence, and the increased use of the prosocial conflict tactic of reasoning during conflicts with the sibling). Additionally, this investigation further augments existing scholarship on adult sibling types as it is the first in this line of research to examine dark side, dysfunctional, or otherwise negative communication – in this case, in the context of conflict perceptions and behaviors. Specifically, this study supplements extant research by demonstrating harmful and overtly dangerous outcomes associated with the apathetic/hostile adult sibling type (i.e., perceptions of negative sibling influence/differentiation and the increased use of the violence conflict tactic). Further, across adult sibling types, this study provides insight into why emerging adult siblings use both constructive and destructive tactics during conflict with each other.

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