CONFIRMATION AS A MODERATOR OF RIVALRIES AND RELATIONAL

OUTCOMES IN YOUNG ADULT SIBLING RELATIONSHIPS

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Confirmation as a Moderator of Rivalries and Relational

Outcomes in Young Adult Sibling Relationships

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This study explored young adult siblings' use of confirming behaviors as a moderator of sibling rivalry and relational outcomes in the sibling relationship (i.e., closeness and satisfaction). Participants included 329 young adults who completed online questionnaires concerning their perceptions of their sibling relationship, including their parents' treatment of them and their siblings, sibling confirmation, sibling challenge, and closeness and satisfaction with the sibling relationship. Bivariate correlations supported the hypothesized negative associations among perceptions of parents' differential treatment (i.e., an indicator of rivalry) and sibling confirmation, challenge, closeness, and satisfaction, as well as the positive associations among sibling confirmation, challenge, closeness, and satisfaction.

Multivariate tests were conducted separately for participants' perceptions of differential parental treatment that favored them and/or their siblings, and the results of these tests provided partial support for the hypothesis that sibling confirmation would mitigate the negative effects of a sibling rivalry on sibling closeness and satisfaction. Specifically, moderate to high levels of sibling confirmation from the target sibling helped mitigate the negative effect of parents' differential treatment of the target sibling on the participant's closeness and satisfaction with the target sibling. Among the more important implications of this study is the finding that confirmation moderates the negative effect of rivalry on the sibling relationship, but only when

young adults report that their sibling perceives that s/he is the recipient of their parents' differential treatment.

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Young Adult Sibling Relationships

Sibling relationships are one of the longest enduring relationships an individual can

experience (Martin, Anderson, & Rocca, 2005; Whiteman, McHale, & Soli, 2011), and they

often provide a valuable source of social support that is second only to parental support

(Cicirelli, 1995; Mikkelson, 2006; Wellman & Wortley, 1989). Although parent-child

relationships are important, early in life "children spend more time in the company of their

siblings than with their parents" (Volling, 2003, p. 206). In fact, the sibling relationship has the

potential to last much longer than the parent-child relationship. According to Mikkelson (2006;

Mikkelson, Floyd, & Pauley, 2011), even after siblings are no longer cohabitating, they often

continue to need and support each other as they age and as their parents pass away. Moreover,

sibling relationships offer physical and psychosocial benefits to both members of the dyad

(Mikkelson et al., 2011; Milevsky, 2011). For instance, Connidis (1989) found that the majority

of people who have a sibling consider their sibling relationship to be, in general, close and

supportive. Given the potential benefits of a sibling relationship, then, research further

investigating those factors that enhance the quality of the sibling relationship is warranted.

According to Fowler (2009a), one of the central, underlying motivations for sibling

communication across the lifespan is intimacy. In other words, most individuals are motivated to

sustain their adult sibling relationships across the lifespan so as to maintain a close and satisfying

sibling relationship. Despite the underlying motivations and potential outcomes of healthy

sibling relationships, however, such relationships also have the potential to be destructive.

Specifically, rivalry in the sibling relationship can be destructive to the overall quality of the

relationship, and particularly, to the level of closeness and satisfaction felt in the relationship.

Sibling rivalry is defined as "competition between siblings for the love, affection, and attention of one or both parents or for other recognition or gain" (Leung & Robson, 1991, p. 314). Stocker and McHale (1992) found that the amount of warmth a child received from a parent was directly associated with the level of rivalry the child felt toward his/her sibling. In addition, the less favored the child felt by the parent, the more likely he or she was to perceive a rivalry. Although sibling rivalry and sibling conflict can be investigated separately, the two constructs are closely related and researchers in child development often use indicators of rivalry and conflict almost interchangeably. Notably, Volling (2003) speculated that "intense rivalries based on discrepant performance or talents can lead to negative evaluations of self and lower self-esteem" (p. 207). Cicirelli (1985) suggested that rivalry does not need to be felt or perceived by both siblings. Rather, as long as one sibling perceives that a rivalry exists, then the possibility of destructive behaviors that undermine close and satisfying adult sibling relationships also exists. Although rivalries may be jointly enacted, those that are predominantly one-sided may still be detrimental to the relationship.

Despite the potentially negative and long-lasting effects of rivalry, research indicates that siblings may find ways to have close and committed relationships through the use of social support (Cicirelli, 1995; Rittenour, Myers, & Brann, 2007). Nevertheless, researchers investigating sibling rivalries rarely account for the basic premise that siblings negotiate and maintain their own interpersonal relationships once they have moved out and are on their own. In other words, siblings possess the communicative agency to craft their own rivalries and relationships independent of the rivalry their parents may have initially created through favoritism. Although rivalry may originate with how parents communicate with their children (Floyd & Haynes, 2006), siblings may continue to communicatively enact that rivalry on their

own. Through their own interactions as young adults, siblings may reinforce and/or perpetuate a

pre-existing rivalry or they may communicate in ways that help them to overcome the negative

effects of the rivalry. Consequently, research investigating communication behaviors that help

mitigate the otherwise negative effects that rivalries have on relational outcomes in sibling

relationships is warranted.

One prosocial communication behavior that might be central to maintaining a healthy and

satisfying sibling relationship is confirmation. Confirming behaviors communicate to an

individual that he/she is treasured and irreplaceable. Confirmation is primarily viewed as a

positive communication act that is associated with a host of psychosocial and relational

outcomes, including self-esteem, an enhanced self-concept, feelings of autonomy (Dailey, 2009),

closeness (Fowler, 2009b), and relational satisfaction (Fowler, 2009b; Schrodt & Ledbetter,

2012). Individuals who are confirmed feel validated, unique, and irreplaceable (Ellis, 2002). If

sibling rivalries often emerge based on one sibling feeling undervalued and/or not as favored by

a parent, then siblings who choose to communicate with each other in confirming ways that

demonstrate the other is valued and appreciated in the relationship may be able to sustain close

and satisfying relationships despite the rivalry. Indeed, sibling confirmation is likely to enhance

the positive qualities of a young adult sibling relationship and potentially mitigate the deleterious

effects associated with sibling rivalry.

Consequently, using the theory of natural selection (Darwin, 1859) and its corollary

principle of discriminative parental solicitude (DPS) (Daly & Wilson, 1980, 1987), this study

explored the negative effects of sibling rivalry on relational closeness and satisfaction in the

adult sibling relationship, as well as the degree to which sibling confirmation moderated such

associations, if at all. Although some sibling rivalries persist well into adulthood (Finzi-Dottan &

Cohen, 2010), it remains unclear why some siblings go on to have healthy relationships and others do not. Therefore, this study tested the degree to which sibling confirmation operates as a theoretical mechanism that alters the negative associations between sibling rivalries and relational outcomes in the sibling relationship.

Theoretical Perspective

Theory of Natural Selection

One theory that helps frame an investigation of sibling rivalry is Charles Darwin's theory of natural selection (TNS) (Darwin, 1859; Glick & Kohn, 1996). According to this theory, humans have adapted over time to their environment, producing slow, but subtle changes in human genetics. These genetic changes are due at least in part to natural selection, which is the process by which humans choose mates for the purposes of survival and procreation. In other words, as humans choose mates based on factors that contribute to survival and reproduction, the genetic features that foster those abilities become more prominent in society (Darwin, 1859; Floyd & Haynes, 2005, 2006).

This theory offers valuable insight for communication studies as a whole and family communication in particular (Floyd & Haynes, 2005, 2006). Specifically, TNS has been used to examine differences in the distribution of resources in parent-child relationships (Daly & Wilson, 1987) and how such differences foster sibling rivalries (Floyd & Haynes, 2006). Biological parents share up to 50% of their genetic code with their children, and this genetic relatedness is one of the reasons why parents support their children. TNS is focused on survival and reproduction, and by investing in the children with whom they share a genetic code, parents are nurturing and enhancing the survival rate of their own genes. Because of this, parents want to distribute resources in a way that increases the chances that their genes will be passed on (Floyd

& Haynes, 2006). For example, parents might divide resources evenly between children if they are equally likely to reproduce, or they might provide more resources to one child over the other if one is unlikely to have children. However, children are often focused on their own survival and therefore may want more than just half of the resources, thereby fostering sibling rivalry. Despite the amount of shared genetic code between siblings, TNS suggests that children are more likely to focus on their own needs first, and then focus on others who share their genetic code (Floyd & Haynes, 2006).

Although parents would like to believe that they distribute resources fairly and equally, researchers have demonstrated that this is often not the case (Harris & Howard, 1985; Lee, 2009). Parents often do, in fact, "play favorites" and communicate in subtle and oftentimes indirect ways with their offspring that they perceive are most likely to continue their genetic line. Although not without controversy, this general tenet from TNS provided the basis for the theory of discriminative parental solicitude (DPS) (Daly & Wilson, 1980, 1987). Put simply, DPS posits that parents distribute resources (e.g., affection, time, money, social support, etc.) differently based on factors such as biological relatedness and the ability of their offspring to reproduce. This provides two sources of rivalry in the sibling relationship: (1) the potential inequity of parental resources, and (2) the competition that may result from the division of such resources (Floyd & Haynes, 2006).

Discriminative Parental Solicitude

Scholars have studied sibling rivalries predominantly from the perspective of parental favoritism and DPS (Finzi-Dottan & Cohen, 2010; Rauer & Volling, 2007; Suitor et al., 2009; Thompson & Halberstadt, 2008). In other words, most sibling rivalries emerge as a function of how parents differ in their distribution of physical, social, and emotional resources to their

offspring. In one of their more shocking illustrations, for example, Daly and Wilson (1994) demonstrated that DPS predicts the frequency with which children are lethally assaulted by stepfathers as opposed to biological fathers, as well as the type of assault that is used. Moreover, children who live with a stepparent are more likely to be physically assaulted, and they are more likely to die from beatings, than children who live with biological parents (Daly & Wilson, 1985). Floyd and Morman (2001) investigated the extent to which fathers differed in their distribution of affection to biological and non-biological sons, and they found that men gave more affection to their biological and adopted sons than their stepsons. This finding is in line with DPS and how parents distribute more resources to those with whom they are genetically related.

Although DPS is often associated with sibling rivalry (Rauer & Volling, 2007; Thompson & Halberstadt, 2008), researchers have yet to account for how sibling interactions independent of the parental relationship enhance or diminish the effects of a rivalry. Whiteman et al. (2011) suggested that through an attachment theory lens, the relationship model provided by a child's primary caregiver influences the child's ability to have a quality sibling relationship. In addition to parents being able to model positive relational characteristics, the extent to which parents display favoritism is a predictor of negative sibling relationships (Stocker & McHale, 1992). These associations exist not only in early sibling relationships, but also in adolescent (Whiteman et al., 2011) and young adult sibling relationships (Finzi-Dottan & Cohen, 2010). Although sibling relationships change over the lifespan, researchers have found that adult sibling relationships may still experience rivalry as a function of parental favoritism (Finzi-Dottan & Cohen, 2010; Ross & Milgram, 1982; Whiteman et al., 2011). Characteristics of differential parental treatment might change throughout life stages, but nevertheless, researchers have

suggested that the perception of unfairness and favoritism is the key factor in contributing to the existence of a sibling rivalry (Whiteman et al., 2011).

Sibling Rivalry

It is challenging to define rivalry, as researchers have commonly used jealousy (Whiteman et al., 2011), conflict, and competition interchangeably (Volling, 2003). Throughout the literature, these terms have been used synonymously with rivalry and despite their differences, they are not viewed as different in the context of child development research on sibling rivalry. Overall, rivalry has multiple facets from which it can be studied. However, for the purposes of this study and to remain consistent with DPS, only the extent to which the participant perceived differences in parental treatment was investigated as an indicator of rivalry. In other words, the extent to which siblings perceived a difference in attention from their parents served as an indicator of rivalry in the sibling relationship. Researchers have examined both shared and differential experiences that siblings encounter, and the extent to which parents differ in the treatment of their children may account for some of the variance in how children mature. Stocker and McHale (1992) speculated that environmental differences (e.g., DPS) might account for more variance in child development than environmental similarities. This could be due to the negative valence that is often associated with DPS, favoritism, and sibling rivalry.

Consistent with the theoretical claim that differential parental treatment is the primary determinant of sibling rivalry, Ross and Milgram (1982) found that 71% of the siblings they interviewed considered their rivalry to be initiated by a parent or some other adult figure. Moreover, they found that rivalry was more frequently reported to be destructive in nature than constructive. In addition, Boll, Ferring, and Filipp (2003) found that siblings who felt they were treated equally by both parents had the most positive relationship. Stocker and McHale (1992)

reported that children's perceived parental warmth from both mother and father was inversely associated with sibling rivalry. In other words, the more warmth children felt from their parents, the less likely they were to exhibit rivalry toward their sibling. However, these researchers did not account for how the child reacted toward his/her sibling when the target sibling received more warmth than did the participant.

In other research, Riggio (2006) found that the younger of two siblings reported the most negativity toward the sibling relationship. However, Riggio did not survey both members of the sibling dyad in order to determine if they had similar perceptions of relationship quality. For instance, in earlier research, Daniels and Plomin (1985) suggested that siblings within the same household have different experiences in regards to parental treatment, sibling interactions, peer interactions, and overall experiences. Specifically, Daniels and Plomin examined both biological and adopted siblings' perceived differences on four different dimensions: sibling interaction, peer characteristics, differential parental treatment, and experiences unique to the individual. Although they found that adopted siblings perceived greater differences in how they were treated and the experiences they had compared to biological siblings, there was not a statistically significant difference between the means across both groups. They concluded that siblings' differences in experiences, parental treatment, and interaction are more likely a result of environmental factors than genetic ones. Finally, they found that younger siblings were more likely to feel jealous of older siblings, indicating that perhaps older siblings are more established in their relational patterns with their parents and do not feel the difference in parental treatment to the same extent as their younger siblings.

Severe sibling rivalries in early childhood can have long-lasting effects on adult sibling relationships, specifically in terms of relationship closeness (Volling, 2003). Given that adult

sibling relationships can be a valuable source of social support, understanding how sibling

rivalry affects relational outcomes (e.g., closeness and satisfaction) is important to the

development of research on adult sibling relationships. Although Volling posited that conflict is

part of rivalry, she also acknowledged that conflict is inherently neither good nor bad. Conflict

has the potential to help children develop certain social and negotiation skills, though chronic

and/or severe conflict might escalate the perceived rivalry between siblings and undermine

healthy childhood development. More importantly, "one of the factors that have been identified

as influential in determining the nature of sibling relationships is the individual's experiences of

differential parenting practices within the family" (Finzi-Dottan & Cohen, 2010, p. 4). Gilbert

and Gerlsma (1999) and Suitor, Sechrist, Steinhour, and Pillemer (2006) found that adult

children were able to report on parental differential treatment. This indicates that even as *adults*,

children may still perceive that there are differences in how they are treated. For instance, Rauer

and Volling (2007) found that sibling jealousy was positively associated with parental

differences in the distribution of affection, and Finzi-Dottan and Cohen (2010) found that

participants' perceptions that the target sibling was favored resulted in more conflict and less

warmth in the sibling relationship (i.e., more rivalry).

Overall, then, researchers have demonstrated that young adult children do perceive

differences in how parents treat them relative to their siblings (Boll, Ferring, & Filipp, 2003;

Finzi-Dottan & Cohen, 2010). When siblings feel a strong rivalry toward each other, they often

seek to de-identify from their sibling (Milevsky, 2011), which in turn generates perceptions of

less commonality and less closeness between them. Reduced contact and perceptions of

dissimilarity, in turn, are likely to reduce closeness in the young adult sibling relationship.

Moreover, Folwell, Chung, Nussbaum, Bethea, and Grant (1997) found that siblings reported

more commonalities as one of the reasons for relationship closeness, whereas Finzi-Dottan and

Cohen (2010) found that both high and low levels of similarity between siblings resulted in

higher levels of conflict. If parental favoritism fosters a sibling rivalry, and sibling rivalries

invoke feelings of jealousy, anger, and frustration that are often communicated in both the

frequency and intensity of sibling conflict and aggression, then it stands to reason that the

experience of a sibling rivalry (as indicated by perceptions of parents' differential treatment)

should be negatively associated with relational closeness and satisfaction in the young adult

sibling relationship. Consequently, the first two hypotheses were advanced to test this line of

reasoning:

> H1: Perceptions of a sibling rivalry are negatively associated with relational closeness in
>
> the young adult sibling relationship.

> H2: Perceptions of a sibling rivalry are negatively associated with relational satisfaction
>
> in the young adult sibling relationship.

Confirmation as a Mitigator of Sibling Rivalries and Relational Outcomes

Although TNS and DPS provide theoretical justifications for testing the direct effects of

sibling rivalry on closeness and satisfaction in the adult sibling relationship, to date, researchers

have generally neglected the idea that young adult siblings possess the communicative agency to

negotiate and maintain their own relationships independent of their parents' (in)equitable

distribution of resources. In other words, TNS and DPS are deterministic theories that generally

neglect the idea that young adult siblings negotiate and maintain their relationships through

interaction. Thus, the second goal of this study was to test the degree to which siblings

communicate with each other in ways that ameliorate the potentially negative effects of a sibling

rivalry. One communication behavior with the potential to mitigate the effects of a sibling rivalry on relational outcomes is confirmation.

According to Ellis (2002), "Confirmation may well be the most significant feature of human interaction" (p. 319). Confirmation is defined as "the degree to which messages validate another as unique, valuable, and worthy of respect" (Dailey, 2009, p. 274). However, disconfirming messages communicate that others are "*not* endorsed, recognized, nor acknowledged as valuable, significant individuals" (Dailey, 2009, p. 321). In family relationships, for example, confirming behaviors include attending sporting events or activities, enacting nonverbal behaviors that indicate undivided attention and interest, and encouraging the expression of ideas. On the other hand, disconfirming behaviors include things such as insulting the individual, not paying attention during conversations, and criticizing the other. In the sibling relationship, siblings may choose to enact some of these behaviors in an effort to have a quality relationship and demonstrate how much they like their sibling. That is, siblings may make the effort to go to each other's events, listen to their ideas, and provide encouragement. Through the act of confirming each other, siblings validate one another in an attempt to express how much they like each other, perhaps despite the presence of parental favoritism. In earlier research, Ross and Milgram (1982) suggested that when siblings fail to provide the recognition the other sibling requires, rivalry is more likely to take place. This suggests, albeit indirectly, that confirming behaviors might mitigate the intensity of a sibling rivalry.

Although previous confirmation research focused primarily on the parent-child relationship, one notable exception is Dailey's (2009, 2010) research investigating the effects of sibling confirmation on adolescents' mental well-being. Specifically, Dailey (2009) compared the effects of mother, father, and sibling confirmation on the psychosocial adjustment of

adolescents. Not only was parental confirmation a positive predictor of adolescents' psychosocial adjustment, but sibling confirmation emerged as a positive predictor of their adjustment as well. Dailey (2009) found that sibling confirmation is positively associated with adolescent self-esteem, self-concept, and autonomy. Moreover, after controlling for the frequency of parental and sibling confirmation, mothers' and siblings' confirmation were significant predictors of adolescent well-being whereas fathers' confirmation was not. Thus, sibling confirmation continues to have a positive effect on adolescents' psychosocial adjustment even after controlling for the influence of parental confirmation.

According to Dailey (2009), "Confirming responses show individuals they are allowed to have their own perspective and are unconditionally accepted" (p. 274). Although confirmation has been studied from a sibling perspective, researchers have not investigated how sibling confirmation affects the quality of the sibling relationship. Researchers have found that siblings offer a valuable source of social support (Mikkelson et al., 2011), especially later in life, and it stands to reason that those siblings who are closer and more satisfied in their relationship are more likely to rely on their sibling for social support. Thus, one communicative behavior that siblings might use to form and maintain a more satisfying relationship is confirmation, given that such behaviors reinforce the importance of acknowledging each other as unique individuals who cherish each other. Those siblings who use communication behaviors to affirm the individual and the relationship should be more likely to have close and satisfying relationships. Not only could these behaviors be important to sibling relationships, but as siblings age and move out of their parents' home, confirming behaviors might become even more vital to the quality of the relationship. As children age, they are more likely to have a better understanding of each other and to feel more comfortable expressing both positive and negative emotions in their sibling

relationships, due to the intimacy that results from spending more time in interactions with siblings compared to other individuals (Dunn, 2002). Consequently, siblings who communicate in confirming ways may enhance the quality of the relationship by validating the sibling and making him or her feel that s/he is worth more than the rivalry (i.e., the differences in parental treatment). To test this line of reasoning, the following hypothesis was advanced for consideration:

> H3: Perceptions of sibling confirmation are positively associated with relational closeness in the young adult sibling relationship.

Likewise, satisfaction is an important aspect of a healthy relationship, and although it has been studied in the context of sibling relationships (Floyd & Parks, 1995), it has not been linked specifically to confirmation in the sibling relationship. Researchers have demonstrated that confirmation from mothers and fathers is associated with positive adolescent psychosocial outcomes, and is even considered to be a vital component of the developmental process in general (Ellis, 2002). In addition, Schrodt and Ledbetter (2012) found that parental confirmation is a significant predictor of young adult children's perceptions of family satisfaction, thereby linking confirmation to family satisfaction. Given that satisfaction is an important indicator of a healthy sibling relationship, it stands to reason that confirmation as a supportive communication behavior would predict relational satisfaction (Ellis, 2002). To test this, a fourth hypothesis was advanced:

> H4: Perceptions of sibling confirmation are positively associated with relational satisfaction in the young adult sibling relationship.

Rivalries often emerge as one sibling is compared to the other by the parent and made to feel less than adequate by comparison, in essence, creating a relational environment in which the

sibling feel may feel that he/she is not valued. If the sibling rival is confirming despite the

parents' inequitable distribution of time, attention, and resources, however, this may help

overcome the negative effects of the sibling rivalry. Through confirming messages, siblings may

be able to feel that they are still unique, despite what they might perceive from their parents.

Even though siblings may perceive that their parents favor one child and distribute resources

unequally, thereby creating sibling rivalry, the siblings themselves may actually like each other

and continue to affirm the importance of their relationship and/or friendship to each other. In

other words, rivalries are not always severe enough to be hostile; there may, in fact, be friendly

rivalries among siblings, particularly as siblings grow into adulthood, mature, and move beyond

their sibling squabbles.

Despite this possibility, however, most rivalries are likely to diminish relational closeness

and satisfaction among siblings. When rivalry is felt in the sibling relationship, then the degree to

which siblings communicate with each other in a confirming manner might prevent that rivalry

from being as destructive to the relationship. In terms of disconfirming behaviors, individuals no

longer see themselves as valuable or unique, and therefore disconfirming messages might

exacerbate the rivalry or jealousy and expedite relational deterioration. Rivalry tends to create

conflict in the sibling relationship as individuals compete for perceived limited resources, such as

time, affection, and monetary support (Floyd & Haynes, 2006). Even if parents attempt to

distribute those resources evenly, TNS suggests that siblings will lobby for all available

resources in order to increase their chances of success (Darwin, 1859; Floyd & Haynes, 2006).

Such competition or conflict is likely to create a relational environment where siblings attempt to

defend their own cause or argue for their own merit by minimizing their sibling's worth and

value to their parents. Moreover, siblings might be likely to devalue their sibling as a way of

appearing more worthy in the eyes of their parents. In this sense, the more rivalry and competition for resources there is in the relationship, the less likely siblings are to engage in validating behaviors. To test this, the following hypothesis was advanced for consideration:

H5: Perceptions of a sibling rivalry are negatively associated with perceptions of sibling confirmation in the young adult sibling relationship.

Finally, there is indirect evidence to suggest that sibling confirmation could potentially mitigate the negative effects of a sibling rivalry on closeness and satisfaction in the sibling relationship. For example, Schrodt and Ledbetter (2012) found that confirmation, particularly mothers' confirmation, helps to mitigate the negative effects of young adults' feelings of being caught between their parents on family satisfaction. Feeling caught is a form of triangulation where the young adult child feels as though he/she must betray one parent in order to be loyal to the other. Although this does not offer direct support for confirmation as a moderator in the sibling relationship, sibling rivalries represent a distinct, yet similar form of triangulation within the family system. That is, rivalry frequently occurs as a function of the interaction patterns that occur among three (or more) family members, where one sibling feels left out as a result of parental favoritism or a discrepancy in resource distribution. Although sibling rivalry and feeling caught represent two different forms of triangulation, it seems plausible to suggest that rivalries might also be mitigated by prosocial behaviors such as confirmation. Schrodt and Ledbetter's (2012) research offers indirect evidence to suggest that such processes might exist, whereby siblings' confirmation mitigates the negative effects of rivalry on relational closeness and satisfaction in the sibling relationship. Because confirmation serves to validate the individual and his/her accomplishments, those siblings who engage in confirming behaviors should feel less threatened by a sibling rivalry resulting from parental favoritism, thereby creating a more

positive young adult sibling relationship with higher levels of closeness and satisfaction. In essence, if sibling rivalries are negatively associated with closeness and satisfaction, and confirmation is positively associated with both outcomes, then it stands to reason that sibling confirmation may moderate the negative association between rivalry and relational outcomes. Thus, the final two hypotheses were advanced to test this line of reasoning:

H6: Perceptions of sibling confirmation will moderate the inverse association between perceptions of a sibling rivalry and relational closeness in young adult sibling relationships.

H7: Perceptions of sibling confirmation will moderate the inverse association between perceptions of a sibling rivalry and relational satisfaction in young adult sibling relationships.

Method

Participants

The sample included 329 participants enrolled in undergraduate communication courses with a mean age of 19.57 (SD = 2.16). Slightly more than half of the participants were female (n = 189, 57.4%) and two participants did not report their sex. Most participants were Caucasian (83%, n = 273), though 7.6% (n = 25) were Hispanic, 4.9% (n = 16) were African American, 1.5% (n = 5) were Asian, and 1.8% (n = 6) were classified as "Other". Most of the participants were classified as either first-year students (37.2%) or sophomores (33.4%), though 16.1% were classified as juniors and 12.5% were classified as seniors.

Participants were also asked to report demographic information about the sibling with whom they were closest to in age. Participants' target siblings ranged in age from 5 to 40 (M = 20.06, SD = 4.85), and the majority of target siblings were male (53.85%). Most of the

participants were from intact families (79.9%) though 19.5% were from divorced families. When

they lived at home, 79.6% of participants reported that both of their biological (or adoptive)

parents were their primary caretakers. In addition, 97.9% reported that both of their biological

(or adoptive) parents were still living. Regarding birth order, 35.6% (n = 117) of participants

reported being the first born, 37.7% (n = 124) reported being the second-born child, and the

remaining 25.8% (n = 88) reported being born third or later. Participants reported on a first-born

sibling (34%, n = 112), a second-born sibling (49.5%, n = 163), and a third-born sibling (10.6%,

n = 35), with the remaining participants reporting on either a fourth-born or later-born sibling.

Most of the participants reported that the target sibling was a full biological sibling (including

twins, 89.4%, n = 294), though an additional 7.6% (n = 25) reported on a half sibling, 1.5% (n =

5) reported on a step-sibling, and 1.2% (n = 4) reported on an adopted sibling. The average

length of time that participants reported living with their sibling was 15.51 years (SD = 4.35).

Procedures

Participation was solicited from young adult students at a medium-sized, private

university in the Southwest. Upon securing institutional review board approval, undergraduate

students were recruited from communication courses. In order to participate, participants had to

be at least 18 years of age and have at least one sibling (e.g., full, half, step, adopted, or twin).

Participants were instructed to identify the sibling with whom they were closest to in age.

Participants were then asked to report demographic data for themselves, their sibling, and their

family structure. After consenting to participate in the study, participants voluntarily completed

an online questionnaire (see Appendix). At the instructors' discretion, students were awarded

minimal course credit, or extra credit (less than 2%), for their participation in the research.

Students completed the online questionnaire during a designated class period, or outside of

regular class time, and all responses were anonymous. The questionnaire took approximately 35 minutes to complete.

Measures

      Perceptions of sibling rivalry. Participants' perceptions of sibling rivalry were measured using Daniels and Plomin's (1985) Sibling Inventory of Differential Experience (SIDE) scale. Daniels and Plomin (1985) developed the SIDE questionnaire in order to investigate differences between biological and adopted siblings. There are four dimensions to the original scale, including sibling interactions, parental treatment, peer groups, and life experiences. For the purposes of this study, only the differential parental treatment dimension of the scale was used. This subscale was modified so that each participant indicated how he/she was treated by each parent compared to the target sibling, as well as how the participant perceived that the target sibling would say that he/she was treated in comparison to the participant. Sample items included "My mother was stricter with me compared to my sibling," and "My sibling would say our father was more proud of him/her for things he/she did compared to me." Responses to the SIDE scale were solicited using a five-point Likert scale that ranged from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Previous research has demonstrated the reliability and validity of the SIDE measure with alpha coefficients ranging from .77 to .93 (Daniels & Plomin, 1985). Rauer and Volling (2007) used the parental treatment subscales of the SIDE and reported alphas of .69 to .78. In this study, the SIDE subscale produced alpha coefficients of .83 for self differential treatment-mother, .88 for self differential treatment-father, .85 for sibling differential treatment-mother, and .91 for sibling differential treatment-father.

      Sibling confirmation. Young adult siblings' perceptions of sibling confirmation were operationalized using modified versions of Ellis' (2002) Parent Confirmation Behavior Indicator

(PCBI) scale and Dailey's (2010) measure of adolescent challenge. Together, these measures were used to assess how frequently the target perceived that his or her sibling displayed confirming and/or disconfirming behaviors. The original PCBI includes 28 items with responses solicited on a frequency scale from 1 (*Never*) to 7 (*Always*). For the purposes of this investigation, one item was removed from the scale and all items were adjusted to reflect the sibling relationship. Sample items included "My sibling attended the sports events, music events, or other activities in which I participated," "My sibling asked my opinion or solicited my viewpoint," and "My sibling avoided physical contact such as touching, hugging, pats on the back, etc."(reverse-coded). Ellis (2002) reported alphas for the PCBI of .95 for both mothers and fathers. Likewise, Dailey's (2010) challenge scale included 21 items that solicited responses on a Likert scale that ranged from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Sample items included "My sibling challenged me to discuss the issues rather than attack others when angry," and "My sibling asked me to explain the reasoning behind my decisions." Dailey (2010) reported alphas for the challenge scale of .82 for mothers, .77 for fathers, and .85 for siblings. In this study, the modified PCBI produced an alpha coefficient of .94 and the challenge scale produced an alpha coefficient of .95.

Relational closeness. Buchanan, Maccoby, and Dornbush's (1991) relational closeness measure was used to assess participants' perceived closeness in the sibling relationship. The scale consisted of 10 items (e.g., "How openly do you talk with your sibling?" and "How careful do you feel you have to be about what you say to your sibling?"), and responses were solicited using a seven-point Likert-type scale that ranges from 1 (*Not at all*) to 7 (*Very much*). Previous researchers have demonstrated the reliability and validity of the relational closeness measure

(e.g., Buchanan et al., 1991; Schrodt & Afifi, 2007). In this study, the measure produced an alpha coefficient of .92.

Relational satisfaction. Young adults' relational satisfaction was measured using an adapted version of Huston, McHale, and Crouter's (1986) Marital Opinion Questionnaire (MOQ). The original 11-item scale was altered to reflect the sibling as the referent instead of a marital partner. Participants were instructed to think about their relationship with their sibling and to report their feelings toward their sibling over the last month. Responses to 10 of the items used 7-point semantic differential scales (e.g., "miserable–enjoyable," "empty–full") and an additional item assessed global satisfaction using responses that ranged from 1 (*Completely dissatisfied*) to 7 (*Completely satisfied*). Previous researchers have demonstrated the validity and reliability of using a modified version of the MOQ to measure family satisfaction (e.g., Schrodt & Ledbetter, 2012; previous α = .92). In this study, the measure produced an alpha coefficient of .94.

Data Analysis

To test the first five hypotheses, Pearson's product-moment correlations were obtained. To test hypotheses six and seven, four forced entry regression analyses were conducted. For the first regression model using relational closeness as the criterion variable, participants' perceptions of differential treatment, sibling confirmation, sibling challenge, and all two-way (rivalry x confirmation, rivalry x challenge, and confirmation x challenge) and three-way orthogonalized interaction terms (rivalry x confirmation x challenge) were entered. For the second model using closeness as the criterion variable, participants' perceptions of sibling differential treatment, sibling confirmation, sibling challenge, and all two-way and three-way orthogonalized interaction terms were entered. For the third regression model using relational

satisfaction as the criterion variable, participants' perceptions of differential treatment, sibling confirmation, sibling challenge, and the orthogonalized two-way and three-way interaction terms were entered. For the fourth model using satisfaction as the criterion variable, participants' perceptions of sibling differential treatment, sibling confirmation, sibling challenge, and the orthogonalized two-way and three-way interaction terms were entered. Following the recommendations of Little, Card, Bovaird, Preacher, and Crandall (2007), the interaction terms were created by centering the first-order predictors and orthogonalizing the product term by regressing it onto the first-order predictors and saving the unstandardized residual.

Results

Preliminary Analysis

Although data were collected for perceptions of mother and father differential treatment, intercorrelations for both the participants' differential treatment ($r = .72$) and their perceptions of their sibling's differential treatment ($r = .73$) were large enough to warrant averaging the scores across both mother and father to create composites of *parents'* differential treatment for the self and the sibling. Consequently, primary analyses were conducted using parents' differential treatment of the participant and the participant's perceptions of their parents' differential treatment of the target sibling as indicators of sibling rivalry.

Primary Analysis

Descriptive statistics, including means, standard deviations, and Pearson's product-moment correlations, for all variables in this study are reported in Table 1.

Table 1

Descriptive Statistics and Pearson Product-Moment Correlations for All Variables (N = 329)

Variable	M	SD	1	2	3	4	5
1. PDT – Participants	2.74	0.72	--				
2. PDT – Target sibling	2.68	0.71	.64**	--			
3. Sibling Confirmation	5.20	0.95	-.29**	-.29**	--		
4. Sibling Challenge	4.94	1.02	-.20**	-.19**	.69**	--	
5. Satisfaction	5.63	1.12	-.21**	-.21**	.57**	.59**	--
6. Closeness	5.07	1.25	-.19**	-.17**	.70**	.74**	.69**

Note. PDT = parents' differential treatment.

** *p* < .01.

H1 predicted that perceptions of sibling rivalry would be negatively associated with relational closeness in the young adult sibling relationship. The results indicate that perceptions of differential treatment for the participant ($r = -.19, p < .01$) and the sibling ($r = -.17, p < .01$) are negatively associated with relational closeness in the sibling relationship. Thus, H1 was supported.

H2 predicted that perceptions of sibling rivalry would be negatively associated with relational satisfaction in the young adult sibling relationship. This hypothesis was supported as perceptions of differential treatment for both the participant ($r = -.21, p < .01$) and the sibling ($r = -.21, p < .01$) were negatively associated with relational satisfaction in the sibling relationship.

H3 predicted that perceptions of sibling confirmation would be positively associated with relational closeness in the sibling relationship. Perceptions of sibling confirmation ($r = .70, p < .01$) and challenge ($r = .74, p < .01$) were positively associated with closeness, and thus, H3 was supported.

H4 predicted that perceptions of sibling confirmation would be positively associated with relational satisfaction in the young adult sibling relationship. Again, this hypothesis was supported as perceptions of sibling confirmation ($r = .57, p < .01$) and challenge ($r = .59, p < .01$) were positively associated with relational satisfaction.

H5 predicted that perceptions of sibling rivalry would be negatively associated with the use of confirming behaviors in young adult sibling relationships. Perceptions of differential treatment for the participant ($r = -.29, p < .01$) and the sibling ($r = -.29, p < .01$) were negatively associated with confirmation. In addition, perceptions of differential treatment for the participant ($r = -.20, p < .01$) and the sibling ($r = -.19, p < .01$) were negatively associated with challenge. Thus, the fifth hypothesis was supported.

H6 predicted that perceptions of sibling confirmation would moderate the inverse association between perceptions of sibling rivalry and relational closeness in young adult sibling relationships. The first forced entry regression analysis using the participants' perceptions of their own differential treatment as the indicator of sibling rivalry produced a significant multiple correlation coefficient, $R = .78$, $F(7, 321) = 72.36$, $p < .001$, accounting for 61.2% of the shared variance in relational closeness. An examination of the beta weights revealed that confirmation ($\beta = .37$, t $= 7.41$, $p < .001$) and challenge ($\beta = .48$, $t = 9.91$, $p < .001$) were significant predictors in the model. None of the interaction terms were statistically significant.

The second forced entry regression analysis used the participants' perceptions of the target sibling's differential treatment as the indicator of sibling rivalry. This model also produced a significant multiple correlation coefficient, $R = .79$, $F(7, 321) = 74.47$, $p < .001$, accounting for 61.9% of the shared variance in relational closeness. Examination of the beta weights revealed that sibling confirmation ($\beta = .37$, $t = 7.51$, $p < .001$), challenge ($\beta = .49$, $t = 10.26$, $p < .001$), and the orthogonalized interaction effect of sibling differential treatment by sibling confirmation ($\beta = .12$, $t = 2.00$, $p < .05$) were significant predictors in the model. This interaction effect was decomposed using the procedures described by Aiken and West (1991) (see Figure 1). The results indicate that confirmation moderates the negative association between perceptions of sibling differential treatment and relational closeness, such that the negative effect of rivalry on sibling closeness becomes statistically non-significant at moderate and high levels of sibling confirmation. Thus, H6 was partially supported.

Figure 1. Interaction effect of perceived sibling perception of discriminative parental solicitude

and confirmation as predictors of sibling closeness. SD = standard deviation.

H7 predicted that perceptions of sibling confirmation would moderate the inverse association between perceptions of sibling rivalry and relational satisfaction in young adult sibling relationships. The first forced entry regression analysis using the participants' perceptions of their own differential treatment produced a significant multiple correlation coefficient, R = .64, $F(7, 321) = 31.00$, $p < .001$, accounting for 40.3% of the shared variance in relational satisfaction. An examination of the beta weights revealed that sibling confirmation ($\beta = .31$, $t =$ 4.96, $p < .001$) and sibling challenge ($\beta = .37$, $t = 6.14$, $p < .001$) were significant predictors in the model. No significant interaction effects emerged.

The second forced entry regression analysis using participants' perceptions of their siblings' differential treatment also produced a significant multiple correlation coefficient, R = .64, $F(7, 321) = 32.30$, $p < .001$, accounting for 41.3% of the shared variance in relational satisfaction. Again, an examination of the beta weights revealed that confirmation ($\beta = .31$, t = 5.01, p < .001) and challenge ($\beta = .38$, t = 6.29, p < .001) were significant predictors in the model, though the orthogonalized interaction effect of sibling differential treatment by sibling confirmation ($\beta = .15$, t = 2.10, p < .05) also emerged as a significant predictor in the model. This interaction effect was decomposed using the procedures described by Aiken and West (1991) (see Figure 2). Consistent with the results for relational closeness, the results indicate that confirmation moderates the negative association between sibling differential treatment and relational satisfaction, such that the negative effect of such treatment on satisfaction becomes statistically non-significant at moderate to high levels of sibling confirmation. Thus, H7 was partially supported.
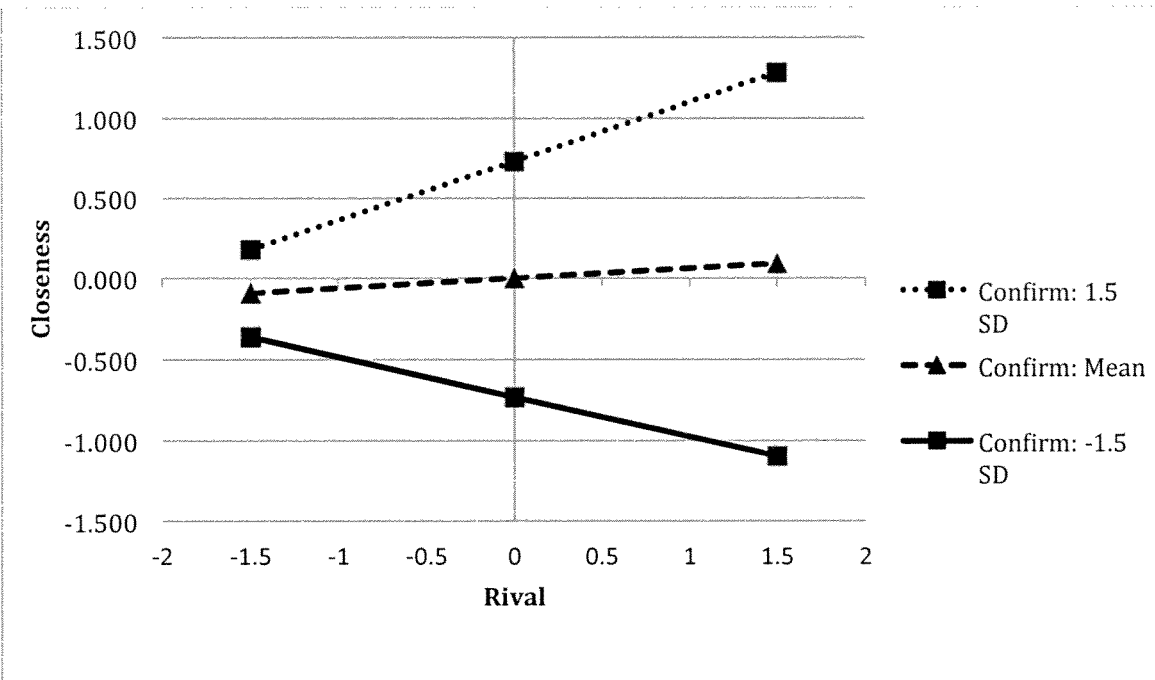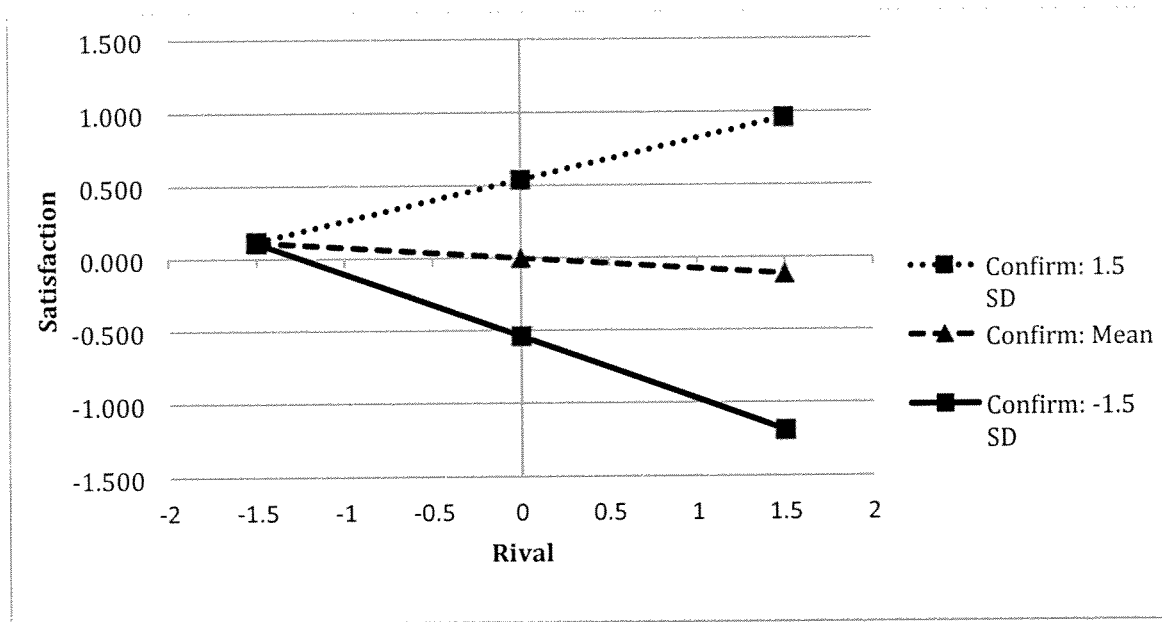
Figure 2. Interaction effect of perceived sibling perception of discriminative parental solicitude

and confirmation as predictors of sibling satisfaction. *SD* = standard deviation.

Discussion

The primary objective of this study was to test the degree to which sibling confirmation (and challenge) moderate the inverse associations between sibling rivalry and relational outcomes such as closeness and satisfaction. Overall, the results generally supported the theoretical line of reasoning advanced in this report. The more young adult children perceive that either they themselves or their siblings have received differential treatment from their parents, the less satisfied and close they feel to their siblings. However, siblings who communicate with each other in confirming and/or challenging ways despite their parents' differential treatment may find that the negative effects of such treatment on their own sibling relationship diminish. This study not only extends discriminative parental solicitude (DPS; Daly & Wilson, 1980) by linking young adults' perceptions of how they and their sibling are treated by their parents to relational outcomes within their own sibling relationship, but it also extends confirmation theory (Dailey, 2009, 2010; Ellis, 2002) by identifying sibling confirmation as a potentially useful behavior for mitigating the deleterious effects of sibling rivalry on the sibling relationship. Consequently, the results of this study offer at least three implications worth noting.

First, the results underscore the idea that how parents distribute their time, resources, and attention to their offspring may influence the kinds of adult sibling relationships that emerge among their children. The theory of natural selection and its corollary principle of DPS indicate that siblings vie for their parents' attention and resources as a subconscious way of securing their survival (Daly & Wilson, 1980). Although the results of this study can only speak to one dimension of sibling rivalries, namely (in)equitable treatment by parents, the results support the notion that this facet of rivalry is negatively associated with relational outcomes that are indicative of sibling relationship quality. Some researchers have argued that as siblings age, their

relationship becomes more voluntary in nature (Mikkelson, 2006). If they perceive a difference in how they were treated by their parents, then based on the results of this study, they may be less likely to communicate with their siblings in ways that enhance their relational satisfaction and closeness. This, in turn, might discourage young adult siblings from seeking social support in times of need (Cicirelli, 1995; Mikkelson, 2006; Wellman & Wortley, 1989). Social support is a key aspect of adult sibling relationships, and if parents' differential treatment of their children fosters dissatisfying and/or distant sibling relationships, then siblings may lose each other as a primary source of social support. In fact, previous researchers have reported negative associations between parental favoritism and sibling warmth in the sibling relationship (Finzi-Dottan & Cohen, 2010). Consistent with this research, the results of the present study indicate that siblings who perceive a difference in parental treatment, regardless of who such treatment favors, may feel less close and satisfied in their sibling relationship. Consequently, future researchers should continue to investigate how siblings make sense of their parents' differential treatment as they (re)negotiate their adult sibling relationships.

The second set of implications to emerge from this study revolves around the positive associations among sibling's confirmation and challenge and relational closeness (H3) and satisfaction (H4). Confirming behaviors communicate to an individual that he/she is irreplaceable and valuable. Although sibling confirmation has been linked to positive psychosocial outcomes in adolescents (Dailey, 2009), researchers have yet to examine how confirming behaviors enhance the adult sibling relationship. The results of this study suggest that when siblings attend each other's events, support each other in their personal endeavors, communicate in ways that acknowledge and respect their sibling's viewpoints, and give them undivided attention during their private conversations, such confirming behaviors (among others)

may bring adult siblings closer together and enhance their relational satisfaction. Likewise, the results suggest that the use of challenging behaviors is also positively associated with closeness and satisfaction. When siblings push each other to be better, to think through and defend their ideas in a competent manner, to work through complex issues and conflict, and more generally push each other to excel, then siblings may be more likely to develop a close and satisfying relationship. Consequently, the use of confirming and challenging behaviors in the young adult sibling relationship may have implications for the continued maintenance of sibling relationships and the subsequent provision of social support.

Of course, the results of this study also speak to the associations among parents' differential treatment and the likelihood that siblings will enact confirming and challenging behaviors within their own relationship. Specifically, when young adult children perceive that either they themselves or their sibling have received differential treatment, they may be less likely to confirm and/or challenge their sibling (H5). Although it is quite plausible that siblings who confirm and challenge each other are less likely to perceive differential treatment in the parent-child relationship given the correlational nature of the data in this report, theoretically, it is more likely the case that parents' (inequitable) allocation of resources to their offspring begins at an early age and perhaps grows more evident to the children as they age and develop greater agency to negotiate their relationships with each other. This set of results is meaningful because it demonstrates the triangular nature of a sibling rivalry. That is, siblings who perceive inequitable treatment by their parents may be less likely to confirm and challenge each other, *not* because of anything they have done themselves but because of how their parents have allocated their time, affection, and resources among the children. Consequently, the communication behaviors that might help siblings negotiate closer and more satisfying relationships independent

of their parents' influence are the very same behaviors that may be less likely to occur when parents play favorites and/or allocate their resources in a differential manner. In essence, the agency that siblings feel to (re)negotiate their adult sibling relationships after leaving home may be constrained by the preferential choices of their parents that emerged during their early childhood.

The third set of implications to emerge from this study coalesces around confirmation as a potential moderator of the association between sibling rivalry and relational outcomes in the sibling relationship (H6 and H7). Although this study examined only one dimension of sibling rivalry (i.e., parents' differential treatment), the results provide some support for the idea that sibling confirmation may help mitigate the negative effect of parents' differential treatment on sibling satisfaction and closeness. Specifically, when young adult children perceive that they are the ones who are receiving more attention from their parents and are the recipients of their parents' differential treatment, then their sibling's confirming and challenging behaviors do little to alter the effect that such treatment has on their own satisfaction and closeness in their sibling relationship. Perhaps young adults do not feel as strong of a need to be validated by their siblings when they are the ones receiving their parents' differential treatment because, in some small way, they feel responsible for the preferential treatment. At the same time, it is possible that they do not feel a strong sense of rivalry with their sibling given that they have already "won" the competition for their parents' resources (e.g., affection, time, monetary).

That being said, if the young adult child perceives that he or she is receiving a difference in parental treatment, it is possible that he/she may feel that the quality of the sibling relationship is relatively unaffected by the parent(s). In other words, the participant may view their sibling's behavior as being independent of their parents' involvement. Siblings may be unlikely to confirm

and/or challenge their sibling when the "preferred" sibling is already receiving the differential treatment that TNS (Floyd & Haynes, 2006) would suggest the sibling desires. Consequently, siblings' use of confirming and challenging behaviors does not change the degree to which participants' perceptions of their own differential treatment are associated with sibling closeness and satisfaction. This extends TNS and DPS by underscoring the importance of the directionality of parents' differential treatment in better understanding how young adults develop closer, more satisfying sibling relationships.

Despite the lack of support for H6 and H7 when analyzed from the perceptions of the participants' differential treatment, both hypotheses were supported when the participants' perceptions of their siblings' differential treatment were investigated. Although sibling challenge did not moderate the associations between perceived sibling differential treatment and relational outcomes, the results did indicate that sibling confirmation mitigates the negative effects of sibling rivalry (as indicated by parents' differential treatment) on both satisfaction and closeness in the sibling relationship. In other words, young adults who reported that their target siblings would say that they were the ones who received more warmth and greater attention from their parents were less likely to be satisfied and close with their target sibling, *unless* the sibling was moderately to highly confirming with them in their sibling relationship. If the target sibling was favored but communicated to the participant sibling in ways that acknowledged, respected, and cherished him or her as a valuable human being, then such behaviors mitigated the negative effects of being favored by the parents on the siblings' satisfaction and closeness.

In many ways, sibling rivalries represent a form of triangulation that emerges when parents allocate more resources to one of their children than to another. Previous researchers have found that confirmation moderates the negative effects of feeling caught between family

members, which is a type of triangulation, on family satisfaction (Schrodt & Ledbetter, 2012). Consistent with this research, the present study extends our understanding of how siblings might enact prosocial behaviors despite their parents' differential treatment in an effort to have more satisfying adult sibling relationships. This result is also in line with the findings of Finzi-Dottan and Cohen (2010), as they reported that sibling warmth was reduced only when participants perceived that their sibling, and not themselves, was favored. Thus, confirming behaviors are helpful in validating the sibling and creating a healthier sibling relationship despite how the parents act, but only when the sibling who receives the differential treatment is confirming in the relationship. Because the child who does not receive differential treatment may feel unworthy and in need of validation that he/she may not receive from the parents, the sibling who receives the differential treatment may have the opportunity through confirming behaviors to validate his or her sibling and enhance their adult sibling relationship (Ross & Milgram, 1982).

Theoretically, the results of this study extend TNS and DPS by linking young adults' perceptions of their parents' behaviors to their siblings' behaviors and subsequent relational outcomes in the sibling relationship. Specifically, this study provides additional support for DPS, in that siblings do perceive a difference in how they are treated by their parents (whether actual differences exist or not) and such perceived differences may change how they interact and negotiate their relationships with their adult siblings. However, despite evidence suggesting that young adult children often perceive a difference in how they and their siblings are raised, future research is needed to determine if, and how, siblings actively try to persuade their parents to treat them differently. In other words, does the perceived difference in how parents allocate their resources rest solely with the parents, or do the children themselves actively participate in exacerbating the perceived differences?

This study also extends confirmation theory through its investigation of not only confirming behaviors, but also challenging behaviors as they relate to relational outcomes in the sibling relationship. Clearly, siblings who confirm each other and challenge each other to become better individuals are likely to develop greater levels of relational closeness and to be more satisfied in their relationship, if nothing more than the simple fact that both behaviors communicate care and attention to the sibling. More importantly, the results extend confirmation theory by identifying confirmation as a potentially useful behavior for siblings who desire to have more supportive sibling relationships despite how their parents treat each of the children in the family. Although both behaviors (i.e., confirmation and challenge) are important to the development of healthy sibling relationships, the results of this study underscore the importance of confirmation, in particular, to the family dynamics of DPS and sibling rivalry. Consequently, future researchers should continue to investigate the unique and combined effects of both confirmation and challenge to both the parent-child relationship and the sibling relationship.

Although the results of this study extend our understanding of sibling rivalries and relational outcomes, the results should be interpreted with caution given the inherent limitations of the research design. One notable limitation is the reliance on self-report data from a homogenous sample of young adult children, all of whom reported on sibling and parental behavior in general over the length of the relationship. A second limitation involves the use of a single measure for perceptions of sibling rivalry. Consistent with DPS, this study employed a measure of parents' differential treatment to indicate the presence of a rivalry. In many ways, this measure represented a proxy for sibling rivalry, and thus, future researchers should incorporate other measures of sibling rivalry that assess levels of competition and hostility in the sibling relationship, as well as whether or not siblings actually view each other as rivals to begin

with. Likewise, the cross-sectional research design and correlational nature of the data preclude statements of causality.

Despite these limitations, this study extends our understanding of sibling rivalries by identifying an interpersonal communication behavior (i.e., confirmation) that siblings can enact to mitigate the tensions and strife that often emerge from parents' differential treatment. Future researchers might extend these results through longitudinal research that investigates sibling rivalry and its influence on relationship quality over the lifespan. In addition, sibling rivalry itself requires further investigation in order to more fully comprehend all of its facets, and provide a more comprehensive theoretical explanation of its antecedents and outcomes. For instance, determining what specific communicative behaviors are associated with rivalry may offer additional insight into the construct, particularly those behaviors that are enacted by the siblings themselves. Although one facet of sibling rivalry involves triangulation with parents, it is quite possible that rivalry in other contexts (e.g., school, work, athletics) does not include a third party. In this sense investigating the extent to which rivalry functions in similar or dissimilar ways would further extend our knowledge of sibling rivalries and may necessitate using other theoretical perspectives besides the ones employed within this study. Future researchers might also use dyadic data to more fully account for siblings' perceptions of differences in parental treatment, and thus, shed additional light on the extent to which perceived differences in parental treatment influence rivalry and relational outcomes in the sibling relationship. Through these types of investigations, researchers can enhance our understanding of sibling rivalries and the degree to which both parents and children contribute to the ongoing existence of such rivalries in families.

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Appendix: Sibling Relationship Questionnaire

DIRECTIONS: In the following spaces, please circle or write the most appropriate response to each question. If there is a separate set of directions, please read those directions carefully and answer each question according to the directions for that section of the questionnaire.

1. What is your age? _____

2. What is your biological sex (please circle one)?
    1   Male
    2   Female

3. What is your current classification in school?
    1   First-year student
    2   Sophomore
    3   Junior
    4   Senior
    5   Graduate student
    6   Other (please specify): _____

4. What is your ethnicity or race?
    1   White   4   Native American
    2   African American   5   Asian American
    3   Hispanic American   6   Other (please specify): _____

5. Who do you currently live with (Or when you lived at home, who were your primary caretakers)?
    1   Biological (or Adoptive) Mother
    2   Biological (or Adoptive) Father
    3   Both mother and father
    4   Mother and Stepfather
    5   Father and Stepmother
    6   Other (please specify): _____

6. If your parents are still married, how long have they been married (in years)? _____

7. Are both of your biological (or adoptive) parents living (circle)?   YES   NO

8a. Are your biological (or adoptive) parents divorced (circle)?   YES   NO

    8b. If you answered "yes" to question 8a, approximately how long has it been since
        your parents divorced? _____
    8c. If your parents are divorced, how long were they married before they divorced? _____

9. On average, how often do you talk with your MOTHER during a typical week? _____ hours _____ minutes

10. On average, how often do you talk with your FATHER during a typical week? _____ hours _____ minutes

11. How many siblings do you have?
        Full biological_____
        Half_____
        Step_____
        Adopted_____
        Twin_____
        Other_____

12. Please circle the number which *best represents* your birth order:

1   2   3   4   5   6   7   8   9

13. Please pick the sibling who is closest to you in age (older or younger) and list his or her initials here____. Please think of this sibling when answering the survey items.

14. What is the age of your sibling? _____

15. What is the biological sex of your sibling (please circle one)?
    1. Male
    2. Female

16. Please circle the number which *best represents* this sibling's birth order:

1   2   3   4   5   6   7   8   9

17. On average, how often do you talk with your SIBLING during a typical week? _____ hours _____ minutes

18. What type of sibling is he/she (please circle one)?
    1. Full biological sibling
    2. Half sibling
    3. Step-sibling
    4. Adopted sibling
    5. Twin
    6. Other (please specify):_____

19. How many years did you live in the same household as your sibling? _____years _____months

Directions: We would like you to think about your relationship with your **SIBLING** over the last month. Please circle the number that most closely describes your feelings toward *your sibling* over the past month.

Miserable:	1	2	3	4	5	6	7	: Enjoyable
Hopeful:	1	2	3	4	5	6	7	: Discouraging
Free:	1	2	3	4	5	6	7	: Tied Down
Empty:	1	2	3	4	5	6	7	: Full
Interesting:	1	2	3	4	5	6	7	: Boring
Rewarding:	1	2	3	4	5	6	7	: Disappointing
Doesn't give me: much chance	1	2	3	4	5	6	7	: Brings out the best in me
Lonely:	1	2	3	4	5	6	7	: Friendly
Hard:	1	2	3	4	5	6	7	: Easy
Worthwhile:	1	2	3	4	5	6	7	: Useless

All things considered, how satisfied have you been with your relationship with your sibling the last month?

1	2	3	4	5	6	7
Completely dissatisfied			Neutral			Completely satisfied

Directions: In this next section, please circle the number that indicates how frequently your **SIBLING** engages in each of the following behaviors using the following response scale:

Never (N)	Seldom	Occasionally	Sometimes (S)	Often	Very Often	Always (A)
1	2	3	4	5	6	7

My *sibling* . . .	Never		Sometimes			Always	
1. Attended the sports events, music events, or other activities in which I participated.	1	2	3	4	5	6	7
2. Made statements that communicated to me that I was a unique, valuable human being.	1	2	3	4	5	6	7
3. Demonstrated that s/he was genuinely listening when I was speaking about issues important to me.	1	2	3	4	5	6	7
4. Belittled me.	1	2	3	4	5	6	7
5. Engaged in negative name calling (labeling).	1	2	3	4	5	6	7
6. Made statements that communicated my ideas didn't count (e.g., "Can't you do anything right?" "Just shut up and keep out of this" or "What do you know about this anyway?")	1	2	3	4	5	6	7
7. Made statements that communicated my feelings were valid and real (e.g., made statements like, "I'm sorry that you're so disappointed, angry, etc.").	1	2	3	4	5	6	7
8. Gave me undivided attention when engaged in private conversations.	1	2	3	4	5	6	7
9. Maintained meaningful eye contact with me when we were engaged in a conversation.	1	2	3	4	5	6	7
10. Asked how I felt about school, family issues, punishments, etc.	1	2	3	4	5	6	7
11. Gave appropriate facial responses such as smiling or nodding during conversations with me.	1	2	3	4	5	6	7
12. Gave clear, direct responses to me during conversations.	1	2	3	4	5	6	7
13. Asked my opinion or solicited my viewpoint.	1	2	3	4	5	6	7
14. Discounted or explained away my feelings.	1	2	3	4	5	6	7
15. Engaged in monologue (continued on and on with whatever he or she had to say, failing to acknowledge anything I had said or tried to interject).	1	2	3	4	5	6	7
16. Used killer glances (put-down looks).	1	2	3	4	5	6	7
17. Ignored me while in the same room.	1	2	3	4	5	6	7
18. Criticized my feelings when I expressed them.	1	2	3	4	5	6	7
19. Ignored my attempts to express my feelings.	1	2	3	4	5	6	7
20. Went off on unrelated tangents during conversations with me.	1	2	3	4	5	6	7
21. Gave ambiguous (unclear, vague) responses.	1	2	3	4	5	6	7
22. Gave impersonal responses (e.g., loaded with clichés or responses that did not truly respond to me).	1	2	3	4	5	6	7
23. Sent double messages (verbal and nonverbal messages that differed).	1	2	3	4	5	6	7
24. Interrupted me during conversations.	1	2	3	4	5	6	7
25. Ascribed motives to my actions (e.g., made statements like, "You're only doing this because . . .").	1	2	3	4	5	6	7
26. Allowed me to express negative feelings.	1	2	3	4	5	6	7
27. Avoided physical contact such as touching, hugging, pats on the back, etc.	1	2	3	4	5	6	7

Directions: Circle the number that best describes your agreement with each statement based on your experience with your sibling during your adolescent years (ages 12-18).

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

		SD			N			SA
1.	My sibling encouraged me to explore different ideas.	1	2	3	4	5	6	7
2.	My sibling helped me channel my negative emotions into more positive actions.	1	2	3	4	5	6	7
3.	My sibling asked questions that made me think.	1	2	3	4	5	6	7
4.	My sibling pushed me to think about other people's perspectives (e.g., put myself in their shoes).	1	2	3	4	5	6	7
5.	My sibling challenged me to discuss the issues rather than attack others when angry.	1	2	3	4	5	6	7
6.	My sibling asked me to explain the reasoning behind my decisions.	1	2	3	4	5	6	7
7.	My sibling encouraged me to try new things on my own.	1	2	3	4	5	6	7
8.	My sibling pushed me to set goals in my sports activities.	1	2	3	4	5	6	7
9.	My sibling helped me understand and deal with my emotions.	1	2	3	4	5	6	7
10.	My sibling made me support or defend my opinions.	1	2	3	4	5	6	7
11.	My sibling discussed different perspectives with me regarding complex issues.	1	2	3	4	5	6	7
12.	My sibling pushed me to resolve problems rather than just complain about them.	1	2	3	4	5	6	7
13.	My sibling exposed me to different experiences.	1	2	3	4	5	6	7
14.	My sibling did not ask me about my opinions.	1	2	3	4	5	6	7
15.	My sibling allowed me to make my own decisions even though I might make a few mistakes.	1	2	3	4	5	6	7
16.	My sibling ignored my perspective if it differed from hers/his.	1	2	3	4		6	7
17.	My sibling pushed me to maintain my physical health.	1	2	3	4	5	6	7
18.	My sibling asked me what I learned or experienced at school or in other activities.	1	2	3	4	5	6	7
19.	My sibling and I had playful arguments about ideas.	1	2	3	4	5	6	7
20.	My sibling discouraged me from showing my emotions.	1	2	3	4	5	6	7
21.	My sibling made me deal with the consequences of my decisions or behaviors.	1	2	3	4	5	6	7

Directions: We would like to know about how close you feel with your **SIBLING.** Circle the number that best indicates how close you feel: **1 = "Not at all", 4 = "Moderately"** and **7 = "Very Much".**

		Not at all			Moderately			Very much
1.	How openly do you talk with your sibling?	1	2	3	4	5	6	7
2.	How careful do you feel you have to be about what you say to your sibling?	1	2	3	4	5	6	7
3.	How comfortable do you feel admitting doubts and fears to your sibling?	1	2	3	4	5	6	7
4.	How interested is your sibling when you talk to each other?	1	2	3	4	5	6	7

5.	How often does your sibling express affection or liking for you?	1	2	3	4	5	6	7
6.	How well does your sibling know what you are really like?	1	2	3	4	5	6	7
7.	How close do you feel to your sibling?	1	2	3	4	5	6	7
8.	How confident are you that your sibling would help you if you had a problem?	1	2	3	4	5	6	7
9.	If you need money, how comfortable are you asking your sibling for it?	1	2	3	4	5	6	7
10.	How interested is your sibling in the things you do?	1	2	3	4	5	6	7

Directions: Please indicate to what extent your MOTHER was this way with **you compared to your sibling** using the following scale:

MOTHER

Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	2	3	4	5

1.	My mother was stricter with me compared to my sibling.	1	2	3	4	5
2.	My mother was more proud of me for things I did compared to my sibling.	1	2	3	4	5
3.	My mother enjoyed doing things with me more than she did with my sibling.	1	2	3	4	5
4.	My mother was more sensitive to what I thought and felt than she was to my sibling.	1	2	3	4	5
5.	My mother punished me more for conflict than she did my sibling.	1	2	3	4	5
6.	My mother showed more interest in things I liked to do than she did my sibling.	1	2	3	4	5
7.	My mother blamed me for what another family member may have done more than she did my sibling.	1	2	3	4	5
8.	My mother tended to favor me more than my sibling.	1	2	3	4	5
9.	My mother disciplined me more than my sibling.	1	2	3	4	5

Directions: Please indicate to what extent your FATHER was this way with **you compared to your sibling** using the following scale:

FATHER

Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	2	3	4	5

1.	My father was stricter with me compared to my sibling.	1	2	3	4	5
2.	My father was more proud of me for things I did compared to my sibling.	1	2	3	4	5
3.	My father enjoyed doing things with me more than he did with my sibling.	1	2	3	4	5
4.	My father was more sensitive to what I thought and felt than he was to my sibling.	1	2	3	4	5
5.	My father punished me more for conflict than he did my sibling.	1	2	3	4	5
6.	My father showed more interest in things I liked to do than he did my sibling.	1	2	3	4	5
7.	My father blamed me for what another family member may have done more than he did my sibling.	1	2	3	4	5
8.	My father tended to favor me more than my sibling.	1	2	3	4	5
9.	My father disciplined me more than my sibling.	1	2	3	4	5

Directions: Please indicate to what extent your sibling perceived that your MOTHER was this way with him or her **compared to you** using the following scale:

MOTHER

Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	2	3	4	5

1. My sibling would say our mother was stricter with him/her compared to me.   1 2 3 4 5
2. My sibling would say our mother was more proud of him/her for things he/she did compared to me.   1 2 3 4 5
3. My sibling would say our mother enjoyed doing things with him/her more than she did with me.   1 2 3 4 5
4. My sibling would say our mother was more sensitive to what he/she thought and felt than she was to me.   1 2 3 4 5
5. My sibling would say our mother punished him/her more for conflict than she did me.   1 2 3 4 5
6. My sibling would say our mother showed more interest in things he/she liked to do than she did me.   1 2 3 4 5
7. My sibling would say our mother blamed him/her for what another family member may have done more than she did me.   1 2 3 4 5
8. My sibling would say our mother tended to favor him/her more than she did me.   1 2 3 4 5
9. My sibling would say our mother disciplined him/her more than she did me.   1 2 3 4 5

Directions: Please indicate to what extent your sibling perceived that your FATHER was this way with him or her **compared to you** using the following scale:

FATHER

Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	2	3	4	5

1. My sibling would say our father was stricter with him/her compared to me.   1 2 3 4 5
2. My sibling would say our father was more proud of him/her for things he/she did compared to me.   1 2 3 4 5
3. My sibling would say our father enjoyed doing things with him/her more than he did with me.   1 2 3 4 5
4. My sibling would say our father was more sensitive to what he/she thought and felt than he was to me.   1 2 3 4 5
5. My sibling would say our father punished him/her more for conflict than he did me.   1 2 3 4 5
6. My sibling would say our father showed more interest in things he/she liked to do than he did me.   1 2 3 4 5
7. My sibling would say our father blamed him/her for what another family member may have done more than he did me.   1 2 3 4 5
8. My sibling would say our father tended to favor him/her more than he did me.   1 2 3 4 5
9. My sibling would say our father disciplined him/her more than he did me.   1 2 3 4 5