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Perceived Parental Differential Treatment and Sibling Relationships in Adolescents

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Abstract

This study aimed to investigate the impact of perceived parental differential treatment (differential paternal control and affection, differential maternal control and affection) on sibling relationships (warmth, conflict, and rivalry) among adolescents. The theory of equity and social comparisons were included in the theoretical framework. The role of demographics was also assessed for the study variables. A correlational design with a purposive-convenient sampling technique was used to collect data from adolescents. A sample of 232 adolescents aged 18 to 24 years (M= 20.84, SD= 1.70) was taken from the main cities of Punjab, Pakistan. SIDE (Daniels & Plomin, 1985) and the ASRQ-S (Stocker et al., 2001) were the measures used in the study. Results revealed a positively related relationship between perceived maternal and paternal affection and sibling warmth and a negative relationship between perceived maternal and paternal control and sibling rivalry and conflict.

Keywords: parental differential treatment, sibling relationships, family relations, sibling warmth, sibling control

Introduction

The period of life that occurs between childhood and adulthood is called adolescence. Adolescence ranges from 10 to 24 years (Sawyer et al., 2018). This transition phase from childhood to adulthood covers a more significant proportion of the life course than ever before when unexpected, and unheard-of experiences and influences impact mental and physical health and well-being throughout these years. This definition encompasses the years 18 to 24 and conforms more closely to the growth of adolescents and the common understandings of this stage of life. This definition would also make it easier to make lengthy investments in broader contexts (Sawyer et al., 2018). However, adolescents do not acquire only genetic traits from their parents but also adopt personal value systems and methods of interacting with others (Maccoby, 2000).

The literature explains and emphasizes the effect of parenting on various aspects of offspring growth and development (Becker et al., 2010). Research has been conducted to study differences across-family and within-family differences. Daniels and Plomin (1987; 2011), in this regard, focused on the non-shared environment and its influence on adolescents' development in terms of within-family differences. The non-shared environment is described as environmental characteristics that differ for adolescents in the same family and contribute to differences in outcomes. These characteristics can either be perceived or actual and might result in environmental differential experiences, including sibling relationships, parental interaction, and personal or individual events for adolescents in the same family (Plomin, 2011). This phenomenon suggests that even siblings do not have the same understanding of family dynamics even when they are reared together (Shebloski et al., 2005). This non-shared environment is the primary source of environmental influences on personality characteristics.

Siblings living in a shared household are usually perceived as similar because of their shared genetic makeup and environment. However, there is evidence found in various studies about the vast differences in terms of behaviours, adjustment, and outcomes (Whiteman et al., 2017). Numerous studies on within-family differences suggested that parental favoritism harms adolescents' mental and psychological well-being and relationships with their siblings in childhood and adolescence (Feinberg et al., 2000). Siblings may be very different from one another, and even if they are raised in the same family, they have distinct experiences with the same parents (Mullineaux et al., 2009; Plomin & Daniels, 1987; 2011).

Parental Differential Treatment (PDT)

When one child receives less warmth or more negativity from a parent than their sibling(s), either perceived or in actuality, it is called parental differential treatment (Rolan & Marceau, 2018). Parental differential treatment is also defined as the amount of unequal treatment parents display toward their adolescents in terms of the amount of control and affection directed to each child (Baker & Daniels, 1990; Plomin, 2011). Another definition used to define PDT is how parents treat their adolescents concerning one another (Feinberg & Hetherington, 2001).

According to research, parents may differ individually in the levels of differential treatment within families (McHale et al., 1995). Hence, in this light, it is acknowledged that regardless of what parents adopt in terms of parenting styles, techniques, and behaviours, they may not always treat their adolescents the same way. This concept is labeled parental differential treatment (PDT).

PDT is an essential component in the maturation process of adolescents since it has a significant impact on adolescents' behaviours, levels of adjustment and self-esteem, the quality of their relationships with their siblings, and their general social and emotional health (Daniels & Plomin, 1985; Jensen et al., 2013; Kowal & Kramer, 1997; Kowal et al., 2004). Parental differential treatment was thoroughly investigated by Plomin and Daniels in 1987. They suggested that siblings are more different than similar to one another because of non-shared experiences in their surroundings. Numerous literature is available on PDT in adolescents, but only scarce literature focuses on the impact of PDT on adolescents throughout adolescence.

Relevant to the current study, Alfred Adler (1956) focused on and examined adolescents' relationships with their siblings to predict psychosocial outcomes. He proposed that PDT results in jealousy, rivalry, and conflict in sibling relationships. Sibling rivalry is characterized as the competition among brothers and sisters for one or both parents' love, affection, and attention or for other recognition or benefit (Gaitonde, 2011). Such characteristics subsequently affect the later life choices and personality development of adolescents (Booth, 2008).

Sibling Relationships

The sibling relationship is said to be unique and characterized by warmth, rivalry, and conflict (Buist et al., 2013). It is one of the closest relationship an individual may have across their lifetime, and it significantly affects psychological adjustment and well-being from childhood through late adulthood (McHale et al., 2013). Relationships between siblings are often the ones that survive the longest and are the ones that are the most stable throughout time. Historically, therapists and researchers had underestimated the significance of the bonds that exist between siblings due to the very emotional nature of these relationships and their role in human development (Feinberg et al., 2012; Walker et al., 2005). Relationships between siblings are distinctive due to the fact that they undergo a transition from a hierarchical structure in early and middle childhood to one that is more equitable in maturity. However, the way control and influence are used within the dyad changes as the power dynamics change (Campione-Barr, 2017).

The relationship between siblings is so profound that it may have an impact even while the siblings are apart (Cicirelli, 1995). A sibling bond is the one that lasts the longest in a person's life (Bank & Kahn, 1997), and given the many different roles that siblings can play in one another's lives like friend, competitor, caregiver, teacher/learner, and manager (Buhrmester et al., 1992). Research also suggests that the sibling bond seems to be of great importance as siblings can act as a cushion in stressful situations (Cummings & Smith, 1993).

In the early stages of adulthood (adolescence), it is common for siblings to have varying degrees of warmth in their interactions. In many circumstances, siblings will be there for one another while they go through life's typical ups and downs, from starting a family to caring for elderly parents. Siblings report feeling close and accepting of one another throughout their middle and late adulthood. The quality of an adolescent's relationship with their sibling seems to impact many aspects of their development and growth. Sibling warmth (love/affection, nurturance, emotional support, and closeness) is connected with adolescents' self-disclosure (Howe et al., 2001). It can also reduce stress load during life events (Luthar et al., 2000) and

can lower their risk for maladjustment (Thoits, 2010). Research conducted with 86 two-parent households with at least two adolescents showed that the quality of siblings' relationships directly affected adolescents' behavioral issues (Hindman et al., 2013).

A new area of research into the significance of sibling relationships in adolescence has emerged as a result of numerous studies on the combination of research on sibling relationships and development throughout emerging adulthood (Conger & Little, 2010).

Theoretical Framework

Equity theory proposes that individuals who feel they have received an unfair proportion of benefits may experience feelings of guilt. In contrast, those who believe they have received an inadequate share may experience negative emotions such as anger, frustration or resentment, and disappointment (Walster et al., 1978). In light of the current study, this theory postulates that when adolescents think that their parents display differential treatment toward any of their siblings, they will experience complicated, challenging, and antagonistic relationships with one another, resulting in reduced warmth and closeness and more significant conflict. Based on this concept, it is believed that siblings experience less closeness and more significant conflict.

The social comparison theory proposed by Festinger (1954) suggests that individuals have an inbuilt and intrinsic need to assess and analyze themselves in comparison to others often (Festinger, 1954). People learn about themselves through social comparison, that is, by comparing their attitudes, skills, and characteristics to others. Most of the time, individuals attempt to compare themselves downwardly or upwardly.

To summarize, on the basis of this theory, it can be argued that feeling unfavored by one's parents might cause one to become distant from their siblings (leading to less closeness) and to hold more resentment against those siblings who are being favored by their parents. On the other hand, if a sibling believes that he or she is preferred over the rest of the family, that sibling is less likely to resent or be hostile to the rest of the family. Because of this, it follows that differential treatment under favorable conditions would lead to improved individual results (Suitor et al., 2009). Furthermore, this theory suggests that through comparisons with others, individuals discover themselves by comparing their thoughts to that of others. With reference to adolescent sibling relationships and differential treatment, more recent studies on social comparisons revealed that people liked to compare themselves to those similar to them (Mcswiggan, 2015).

Conclusively, the social comparison and equity theory can be used to explain the relationship between perceived differential treatment and sibling relationships. Social comparison theory (Suls et al., 2002), equity theory, and Adler's theory of individual psychology (Ansbacher & Ansbacher, 1956) all suggest that differential treatment causes variations in offspring relationships. Based on equity principles, it is predicted that perceived parental favoritism would lower the quality of sibling relationships in adulthood, irrespective of the pattern of favoritism or differential treatment. Alternatively, based on social comparison theories, it is also hypothesized that adolescents who perceive themselves as favored will report more positive sibling relations than those who perceive they are unfavored. In contrast, Adlerian-based research (Ansbacher & Ansbacher, 1956) implies that equal parental treatment is desirable, with differential treatment associated with lower sibling relationships and (in some instances) maladjustment.

Literature Review

The literature on within-family differences in childhood has proven that parental favoritism and perceived parental differential treatment affect adolescents' later relationships. Empirical statistics consistent with fundamental arguments by Freud (1930-1961) and Adler (1956) have revealed in this reference that being the disfavored offspring in the family is associated with lower well-being, but being the favored child is associated with greater well-being in specific situations, (Suitor et al., 2008). Favored adolescents are also more likely to benefit from their parents' interpersonal and financial resources, boosting their chances of successful lives as adults over their siblings (Hertwig et al., 2002).

Differences in the type and direction of PDT might lead to rivalry and conflict among sibling subsystems within the family unit across life. PDT and perceptions of justice and fairness concerning PDT are significant determinants of the experiences of sibling jealousy throughout early childhood (Hart & Legerstee, 2010; Kolak & Volling, 2013) and adolescence (Loeser et al., 2016). The associations between differential treatment and jealousy may persist throughout the early stages of adulthood (Hamwey & Whiteman, 2021). The term *jealousy* refers to an emotional, behavioral, or affective reaction in which one feels envious or resentful of something else's possessions, successes, or abilities relative to one's own (extracurricular activities). Further, jealousy may emerge because of a third person, an item, or quality, and it can happen either because of a perceived or actual experience (PDT, for instance) or because of a triadic environment (Hart & Legerstee, 2013; Kolak & Volling, 2013).

Numerous studies have found significant associations between parental differential treatment (PDT) and the quality of adolescents' sibling relationships. Based on the theories of parental differential treatment, Brody (1998) proposed that the differential treatment promotes negativity in the sibling relationship by developing anger and a feeling of competition (Brody, 1998). This idea was supported by research, which concluded that when parents displayed differential amounts of responsiveness, intrusiveness, and positive and negative affect toward their adolescents, sibling relationships among those adolescents were recognized by less positivity and more negativity (Brody, 1998; McGuire et al., 1996).

It has been shown that the degree to which parents exhibit favoritism to one of their adolescents may affect the quality of the relationships between siblings throughout their lives. Specifically, the research has shown that when one parent prioritizes one child over the others, siblings feel and display less affection and more hatred toward one another. This stands true for both childhood and adolescence (Brody et al., 1994). However, comparisons do not give consistent evidence about whether the parent's partiality is more crucial for the development of siblings' relationships when they are young (McHale et al., 2000).

Another study revealed that in comparison to fathers, mothers are more likely to engage with and provide positive emotional support to their adult adolescents (Buist et al., 2002; Pillemer et al., 2012). Studies conducted from the adolescents' perspective demonstrate that the relationships between them and their mothers are more substantial than those with their fathers. Because mothers and adolescents have stronger relationships, favoring from mothers may have a more significant impact than favoritism from fathers on sibling relationships because such a differential attitude threatens the receipt of mothers' especially highly significant interpersonal resources (Pillemer et al., 2012).

Nevertheless, similar theoretical considerations might indicate that favoritism from fathers would be more destructive to the relationships between siblings than favor from mothers because the bond between a father and a child is relatively weak. Not only are mothers

more likely than fathers to be supportive and tolerant of their adolescents, but fathers are also more likely than mothers to be actively and openly critical of their adolescents and display ambivalence towards them. This is in contrast to mothers, who are more likely than fathers to be supportive and tolerant of their adolescents (Pillemer et al., 2012). The pattern that mothers and adolescents tend to stay close even in widowhood and divorce, although similar life events frequently damage the father-child bond, demonstrates that the ties with fathers are more fragile than those with mothers (Kalmijn, 2007).

Rationale of the Study

Previous research on parental differential treatment has been limited because it has not been explored across varied cultures (Jeannin & Van Leeuwen, 2015; Suitor et al., 2008). The vast majority of studies have concentrated their attention on white populations (i.e., western culture), which has been especially true of the research on PDT conducted among adolescents. However, patterns of parental behaviour, such as discipline, supervision, affection, and parental involvement, can vary from culture to culture.

Parents hold the highest regard in South Asian culture. This regard is an essential component of Islamic teachings in the culture, which recognize parents as holding a position in south Asian culture that is *second only to God*. Asians are obliged to respect their parents unconditionally, and parents acknowledge this rank very seriously. This Asian Islamic culture highly values having harmonious personal relationships as one of its primary goals. Both parents and adolescents are urged to treat one another with kindness and compassion as they carry out their respective roles as guardians and leaders (Obeid, 1988).

The research will provide insights into the nature of adolescents' perceptions, implications, and consequences in parenting and sibling bonds. Besides, the notion of parental differential treatment will provide a novel dimension for exploring emotional and rational influences simultaneously within parent-child and sibling relationships.

Conceptualized Model

Considering the above literature and research explicating various factors and their roles in determining the relationship between parental differential treatment and sibling relationships and the moderating role of birth order in explaining it, the following hypothetical conceptualized model has been proposed:

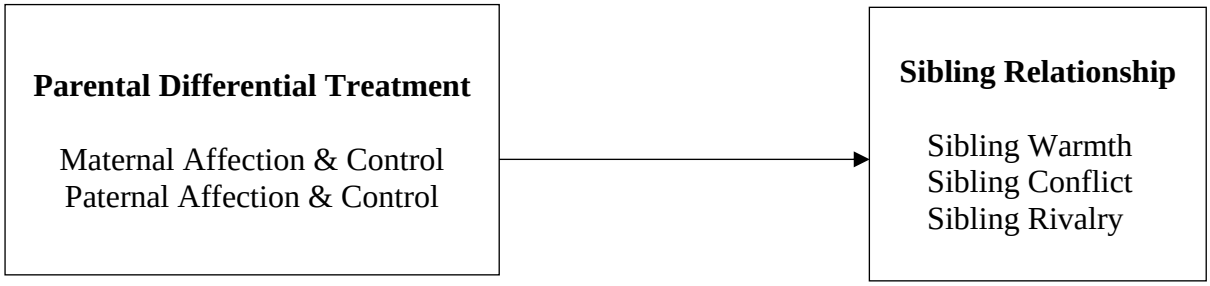

Figure 1: Conceptualized Model of Study

Method

Study Design

The current study used a correlational research design. In this design, parental differential treatment served as an independent variable, whereas sibling relationship was the dependent variable, and birth order served the role of moderator in the study.

Objective

The objective of the study was to investigate:

- The relationship between perceived differential treatment and sibling relationships among adolescents.

Hypothesis

The hypothesis of the current study was to examine:

- Perceived greater maternal and paternal affection is significantly positively related to sibling warmth and negatively related with sibling conflict and rivalry.
- Perceived greater maternal and paternal control is significantly positively related to sibling conflict and rivalry and negatively related to sibling warmth.

Research Instruments

Sibling Inventory of Differential Experience (SIDE)

The Sibling Inventory of Differential Experience (Daniels & Plomin, 1985) was used to assess the adolescents' perceptions of differential parental treatment they received from their parents. SIDE measures sibling differential experience in sibling interaction, parental treatment, peer characteristics, and events specific to the individual. Since the domain of interest to this study was parents' differential treatment, the aforementioned domain consists of four subscales: differential maternal affection, differential maternal control, differential paternal affection, and differential paternal control. Items numbers 1,5,7 and 9 measured dif-

ferential control for both father and mother scales, and items numbers 2,3,4,6, and 8 measured differential affection for both mother and father subscale. This scale's reliability ranges from .78 to .87 (Table 1). No items are reversed in this scale.

Adult Sibling Relationship Questionnaire (ASRQ-S)

The Adult Sibling Relationship Questionnaire (ASRQ) (Stocker et al., 1995) is a 81 item scale used to assess participants' perceptions of warmth, conflict, and sibling rivalry. However, this study used a revised short version of this scale: Adult Sibling Relationship Scale-Short (ASRQ-S) (Stocker et al., 2001). This questionnaire assesses individual's perceptions of their own and their sibling's behaviour as well as perceptions of their sibling's behaviours and feelings toward them. The ASRQ-S consists of 47 items combined to form 3 higher-order factors: Warmth, Conflict, and Rivalry. It is measured using a Likert scale, with "1" being hardly at all and "5" extremely much. Items number 1, 2, 8, 9, 14, 15, 16, 17, 24, 25, 30, 31, 32, 33, 40, 41, 46, and 47 measured sibling warmth, items number 3, 4, 5, 10, 11, 18, 19, 20, 21, 26, 27, 34, 35, 36, 37, 42, and 43 measured sibling conflict whereas items number 6, 7, 12, 13, 22, 23, 28, 29, 38, 39, 44, and 45 measured sibling rivalry. No items are reversed in this scale. Reliability Analysis has been demonstrated for warmth, conflict, and rivalry, with alphas of .91, .84, and .90, respectively (Table 1). Furthermore, permission for each measure and instrument used in the study was taken from relevant authors via email.

Demographic information

A socio-demographic variables form was constructed based on an extensive review of the literature. Demographic information gathered information about the participants' age, gender, number of siblings, family type, socioeconomic status, and birth order of participants and their siblings. They were also asked about their perception of their mother and father's preference in terms of siblings. They were asked whether they perceived their mother and father preferred them or their sibling the most.

Sample

In order to determine the appropriate sample size required to conduct the series of hypothesized moderation models, power analyses were conducted using G*Power 2 software (Faul et al., 2007; Mayr et al., 2007) with an assumed α of .05, power of .95, and small effect size (η^2 = .15). The power analysis indicated a need for a sample size of 101 participants.

A sample of 232 adolescents (Males= 63, 27.2%; Females=169, 72.8%) aged 18 to 24 years (*M*= 20.84, *SD*= 1.70) was taken from main cities of Pakistan using purposive sampling technique. Among the participants, all the respondents had at least one biological sibling (*M*= 4.49, *SD*= 1.32).

Procedure

Data collection was accomplished within two months. All the participants were approached personally to obtain the data. Informed consent was obtained from the participants that provided a briefing regarding the study's rationale and purpose. Anonymity and confidentiality were assured to respondents, and it was assured that the data collected would only be used for research purposes only. Respondents were explained verbally and in writing (native language). 20-25 minutes were provided to each participant to complete the questionnaire. Approximately 570 adolescents were approached for the study. A total data of 282 adolescents were collected, out of which 280 respondents completed the study, and 30 forms were discarded due to the pattern found in completing the questionnaire. The response rate of the respondents was 51.6%, as there was a time constraint in data collection, and most of the adolescents reported no experience of parental differential treatment. Respondents participated voluntarily in the study; no financial assistance or tangible incentives were provided to participate in the present study. The preferred administration of questionnaires was by providing paper copies of the questionnaire.

Data Cleaning and Dealing with Outliers

A data set of 250 cases were screened out to identify outliers and ensure the data sets accuracy. All cases were assessed at the entry-level at first, and 0.6% of cells were found with incorrect data. Typing mistakes and out-of-scale range entries were found in those cells. Data were rectified with the help of hard copies of forms. Box plots were analyzed and examined for the verification purpose of univariate outliers after assuring the accuracy of the data entry. Few univariate outliers were seen on the sibling warmth subscale, and there were a total of 18 cases having outliers where several respondents (7.2% of the sample) with repeated pattern response options; therefore, those cases were exempted from the data set. Finally, the data set was comprised of 232 individuals (adolescents) were ready for final analysis after screening them from all aspects.

Results

The result section includes various statistical analyses to achieve the main objectives of the study. Descriptive statistics were obtained, and their role was assessed for all study variables. Descriptive statistics were computed to summarize features of the sample and measure used in the study. Statistical Package for Social Sciences; SPSS-26 was used to analyze the present study's data. Regression analysis was used to predict the relationship between parental differential treatment and sibling relationships. Mean differences in study variables on demographics were also explored with the help of *t*-tests and ANOVA to investigate gender differences, family type, birth order, and socioeconomic status in PDT. Lastly, SEM was examined to investigate the moderating role of birth order in the study model.

The model was tested on adolescents' birth order samples of present research using AMOS-21 (AMOS Graphics) by model testing using the structural equation modeling technique. The study instruments were analyzed for their psychometric properties using Cronbach's alpha and correlation coefficient tests. To compute the internal consistencies of the measures, alpha reliabilities were computed and reported in psychometric properties (Table 2).

Psychometric Properties of Scales Used for Study Variables

Internal consistency of the study measures was computed by using Cronbach's Alpha Coefficient for reliability. The psychometric properties of study variables are presented in the tables below.

Table 1: Psychometric Properties of Study Variables (N=232)

Variables	*k*	*M*	*SD*	Range	Cronbach's α
Parental Differential Treatment	18				
Affection (Maternal)	5	15.45	2.69	8-24	.84
Control (Maternal)	4	12.01	2.21	8-20	.86
Affection (Paternal)	5	14.80	2.86	8-25	.78
Control (Paternal)	4	11.82	2.43	5-20	.87
Sibling Relationships	47				
Sibling Warmth	18	62.22	13.88	26-80	.91
Sibling Conflict	17	42.91	10.12	24-70	.84
Sibling Rivalry	12	14.46	6.80	13-53	.90

Note. k=items, M= mean, SD= standard deviation

Table 1 shows the alpha reliability, range, mean, and standard deviation of all scales and their subscales of the study. α >.06 values indicate high internal consistency within the scales and subscales. The reliability ranged from .78 to .91 and was considered acceptable. The reliability of parental differential treatment subscales was above .70. Maternal affection subscale consisted of 5 items (α=.84), the maternal control subscale consisted of 4 items (α=.86), the paternal affection subscale consisted of 5 items (α=.78), and the paternal control subscale consisted of 4 items (α=.87). Sibling relationship subscales also had satisfactory reliability values. The sibling warmth subscale consisted of 18 items (α=.91), sibling conflict consisted of 17 items (α=.84), and sibling rivalry consisted of 12 items (α=.90). Sibling warmth and sibling rivalry were found to be highly reliable subscales. All these findings conclude that all measures scales have high reliability and are suitable to measure perceived parental differential treatment and sibling relationships.

Relationship among Study Variables

Bivariate correlations among scales and their respective sub-scales were computed to identify the relationship patterns of research variables to determine the relationship among the study variables. Table 2 presents the patterns of association among study variables. Results indicated a significant correlation among all study variables.

Table 2: ***Correlation Coefficient among all the Variables of the Study (N=232)***

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. Affection (Maternal)	-	-.742**	.744**	-.693**	.776**	-.712**	-.838**
2. Control (Maternal)		-	-.638**	.783**	-.738**	.783**	.854**
3. Affection (Paternal)			-	-.673**	.555**	-.740**	-.808**
4. Control (Paternal)				-	-.723**	.769**	.884**
1. Sibling Warmth					-	-.689**	-.931**
2. Sibling Conflict						-	.975**
3. Sibling Rivalry							-

*Note. *p<.05, **p<.01.*

Table 2 shows the correlational relationship between parental differential treatment variables (maternal control and affection and paternal affection and control) and sibling relationships (sibling warmth, sibling conflict, and sibling rivalry). Results indicate that there is a significant relationship between all variables. Maternal affection is significantly negatively correlated with maternal control (r=-.742, p=.000), paternal control (r=-.693, p=.000), sibling conflict (r=-.712, p=.000) and sibling rivalry (r=-.838, p=.000) respectively and significantly positively correlated with paternal affection (r=.744, p=.000) and sibling warmth (r=.776, p=.000). Maternal control is significantly negatively correlated with paternal affection (r=-.638, p=.000) and sibling warmth (r=-.738, p=.000) whereas significantly positively correlated with paternal control (r=.783, p=.000), sibling conflict (r=.783, p=.000), and sibling rivalry (r=.854, p=.000). Paternal affection is significantly negatively correlated with parental control (r=-.673, p=.000), sibling conflict (r=-.740, p=.000), and sibling rivalry (r=-.808, p=.000); and positively correlated with sibling warmth (r=.555, p=.000). Results also shows that paternal control is significantly negatively correlated with sibling warmth (r=-.723, p=.000) whereas positively correlated with sibling conflict (r=.769, p=.000) and sibling rivalry (r=.884, p=.000). Results shows that sibling warmth is significantly negatively correlated with sibling conflict (r=-.689, p=.000) and sibling rivalry (r=-.931, p=.000) whereas sibling conflict is positively correlated with sibling rivalry (r=.975, p=.000).

Predictive Relationship between Sibling Relationship and PDT72

The aim of the study was to recognize the major and significant predictors of sibling warmth, conflict, and rivalry among adolescent siblings. The purpose of computing linear regression was to examine that if parental differential treatment predicts sibling relationships among adolescents and to identify the relationship between predictor (parental differential treatment) and outcome (sibling relationships). These regression estimates (R^2, Beta values, & F-test) were computed to explain the relationship between dependent and independent variables.

Table 3: ***Multiple Linear Regression Predicting Sibling Relationship (Warmth, Conflict, & Rivalry) from Parental Differential Treatment (Maternal Affection, Maternal Control, Paternal Affection & Paternal Control) (N=232)***

Variable	Sibling Relationship					
	R^2	*B*	*β*	*p*	95% CI	
					LL	*LL*
			Sibling Warmth			
(Constant)		53.16		.000	39.35	66.96
Affection (Maternal)		2.28	.58	.000	1.79	2.75
Control (Maternal)	.716**	-.92	-.19	.003	-1.52	-.323
Affection (Paternal)		-.73	-.18	.001	-1.183	-.285
Control (Paternal)		-1.20	-.28	.000	-1.721	-.681
			Sibling Conflict			
(Constant)		40.72		.000	30.41	51.03
Affection (Maternal)		-.18	-.06	.299	-.546	.168
Control (Maternal)	.734**	1.25	.35	.000	.811	1.702
Affection (Paternal)		-.958	-.30	.000	-1.294	-.622
Control (Paternal)		.797	.25	.000	.409	1.186
			Sibling Rivalry			
(Constant)		15.92		.007	4.32	27.52
Affection (Maternal)		-1.19	-.25	.000	-1.64	-.747
Control (Maternal)	.893**	.96	.18	.001	.422	1.499
Affection (Paternal)		-.84	-.18	.000	-1.223	-.460
Control (Paternal)		1.92	.42	.000	1.466	2.377

*Note. *p<.05, **p<.01, CI= confidence interval, LL= lower limit, UL=upper limit*

Table 3 shows the predictive relationship between parental differential treatment (maternal affection & control & paternal affection & control) and sibling relationships (sibling warmth, conflict, & rivalry). Results indicate that the model is significant $F(4,217)=136.72$, $p=.000$ ($p<.05$), meaning that parental differential treatment variables; Maternal affection ($\beta=.58$, $p=.000$), maternal control ($\beta=-.19$, $p=.003$), paternal affection ($\beta= -.18$, $p=.001$), and paternal control ($\beta=-.28$, $p=.000$) towards respondent are significant predictors of sibling warmth. Findings show that 71.6% variance (i.e., $R^2= .716$) in the model is accounted for by predictors

Results also indicate that model (parental differential treatment predicting sibling conflict) is significant $F(2,216)=148.66$, $p=.000$ ($p<.05$) and shows that maternal control ($\beta=.35$ $p=.000$), paternal affection ($\beta=-.30$, $p=.000$), and paternal control ($\beta=.25$, $p=.000$) successfully predicted sibling conflict except for maternal affection ($\beta=-.06$, $p>.05$). Findings show that 73.4% variance (i.e., $R^2= .734$) in the model is accounted for by predictors (maternal affection & control & paternal affection & control).

Similarly, the above table also indicate a significant predictive relationship between parental differential treatment and sibling rivalry. Results indicate that the model is significant $F(4,149)=309.97$, $p=.000$ ($p<.05$), meaning that maternal affection ($\beta=-.25$, $p=.000$), maternal control ($\beta=.18$, $p=.001$), paternal affection ($\beta= -.18$, $p=.000$), and paternal control ($\beta=.42$, $p=.000$) are significant predictors of sibling rivalry. Findings show that 89.3% variance (i.e., $R^2= .893$) in the model is accounted for by predictors (maternal affection & control & paternal affection & control).

Discussion

The purpose of the study was to explore the relationship between parental differential treatment and sibling relationships. Most of the research focused on parents' viewpoints on differential treatment and sibling relationships throughout childhood. However, few considered adolescents' viewpoints as well. This study was conceptualized to explore how perceptions of PDT were related to adolescents' birth order toward sibling relationships (Figure 1). As personality develops, parent-child and sibling relationships and perceptions emerge and change as an important focus during this development phase.

It was hypothesized that greater maternal and paternal affection has a significantly positive relationship with sibling warmth and a negative relationship with conflict and rivalry, and greater maternal and paternal affection is significantly positively related to sibling conflict and rivalry and negatively related to sibling warmth (Table 2). All these aforementioned hypotheses are accepted for this study as all findings are significant for these hypotheses.

Correlation analysis indicated that all variables appeared to be highly correlated to each other, which indicates that parental differential treatment has a significant impact on sibling relationships where the results revealed that greater control from fathers and mothers (maternal and paternal control) predicts greater sibling conflict and rivalry and greater affection from fathers and mothers predicts greater sibling warmth among siblings. Regression analyses revealed that the hypothesized models were highly significant, where 72% change (variance) in sibling warmth, 73% in sibling conflict, and 89% in sibling rivalry was due to parental differential treatment (Affection & Control from their mothers and fathers). (Table 2 & 3). These findings are consistent

with the previous findings that indicate that maternal and paternal affection is positively correlated with sibling warmth and negatively with conflict and rivalry, and maternal and paternal control is positively related to sibling conflict and rivalry and negatively to sibling warmth (Relva et al., 2019).

All these findings are consistent with previous findings (Jenkins et al., 2003; Ng et al., 2014; Rohde et al., 2003). Conclusively, on the basis of all the findings, it is suggested that in adolescence, siblings continue to be sensitive to the disparity in their parent's behaviour (affection and control) towards their offspring and that sharing parental resources of love and attention may give rise to rivalry and conflict among siblings.

Limitations and Recommendations for Future Study

- The measures used in the study could be validated on more diverse samples for the Pakistani population.
- This study only included the English version of the scale and only those participants were recruited who could at least understand and read English easily. For future researchers, it is suggested to use an adapted version of scales to include diverse samples.
- In future research, observational data and triangulation studies, including parents, siblings, and respondents, may be used to confirm the results of the previous studies.

Implications of the Study

- Family and clinical therapists will benefit from this research in two ways: first, it will help them understand the similarities and variations across parents and adolescents in terms of sibling relationships and perceived parental differential treatment.
- It will assist them in creating therapies that center on family bonding.
- In addition, the findings of this investigation will be added to the existing body of literature, assisting future researchers in their efforts to learn more about the nature of these relationships from various angles. This study also fills the gap in parental differential treatment, sibling relationships, and birth order literature.

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