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Article

Exploring Relationship in “Parental Differential Treatment”, Empathy and Sibling Relationship

Xiaolu Ye

Ph.D, Department of Foundations of Education, Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor Darul Ehsan, Malaysia, Assoc. Prof., Zhejiang Industry & Trade Vocational College, 325000, No. 717, Fudong Road, Lucheng District, Wenzhou City, Zhejiang Province, China.

ORCID iD: <https://orcid.org/0000-0002-0569-158X>

Email: kaximier@126.com

Nor Aniza Ahmad*

Ph.D, Department of Foundations of Education, Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor Darul Ehsan, Malaysia.

ORCID iD:

<https://orcid.org/0000-0002-6230-3336>

Email: nor_aniza@upm.edu.my

Nur Aimi Nasuha Binti Burhanuddin

Senior lecturer, Department of Foundations of Education, Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor Darul Ehsan, Malaysia.

ORCID iD: <https://orcid.org/0000-0003-0453-3579>

Email: aiminasuha@upm.edu.my

Abstract

The aim of this research is to examine the relationship between sibling interactions, empathy, and "Parental Differential Treatment" (PDT). The study investigates how PDT influences "Sibling Relationships" and the moderating role of empathy in this context. Using the Sibling Relationship Questionnaire (SRQ), a standardised self-report survey designed to measure siblings' empathy, perceived parental affection, and differential treatment, quantitative data were collected from 100 participants. The findings indicate a significant positive correlation between sibling empathy and PDT, as well as the quality of sibling relationships. Mediation analysis reveals that individuals with higher levels of empathy are less affected by PDT in their "Sibling Relationships," with empathy serving as a mediating factor between PDT and sibling dynamics. These results underscore the importance of equitable parental behaviour and the fostering of empathy within families for improving "Sibling Relationships." The findings highlight the critical role of empathy in parenting and advocate for strategies to minimise perceptions of favouritism. To address gaps in understanding family dynamics, future research should explore these interactions across different historical periods and cultural settings. This study contributes to the field of family psychology by elucidating how PDT and empathy influence sibling communication and overall family cohesion.

Keywords

Parental Differential Treatment, Sibling Relationships, Empathy, Family Dynamics, Emotional Development.

Correspondence to Nor Aniza Ahmad, Ph.D, Department of Foundations of Education, Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor Darul Ehsan, Malaysia. ORCID iD: <https://orcid.org/0000-0002-6230-3336>, Email: nor_aniza@upm.edu.my

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Introduction

The family environment is characterised by considerable diversity and exerts a profound influence on individual growth and interpersonal interactions. According to [Rolan and Marceau \(2018\)](#), among the various elements that define "Family Dynamics," PDT, "Empathy," and sibling relationships are particularly significant. Understanding the interplay among these factors is instrumental in comprehending family mindsets and child development. PDT refers to the tendency of parents to treat their children differently with regard to attention, discipline, care, and encouragement. In this context, [Campione - Barr and Killoren \(2015\)](#) emphasised that while discipline and attentiveness are necessary within families due to the unique personalities, needs, and developmental stages of children, substantial disparities in parental treatment can disrupt sibling interactions and psychological well-being. Perceived inequity in parental treatment may lead to distrust, rivalry, and resentment among siblings, potentially resulting in long-term deterioration of their relationships. Conversely, [Gilligan, Sutor and Nam \(2015\)](#) observed that when children perceive parental differences as equitable rather than unjust, it can foster cooperation and mutual support among siblings, contributing to healthier relationships.

"Empathy," defined as the capacity to understand and share the emotions of others, is a critical component of emotional intelligence that shapes relationships and interactions. It also functions as a moderating variable in the context of PDT and "Sibling Relationships." [Gungordu and Hernandez-Reif \(2022\)](#) highlighted that empathetic children are better equipped to comprehend the rationale behind differential treatment, reducing feelings of jealousy or anger. Parental behaviour significantly influences the development of emotional understanding, including empathy, which plays a vital role in mitigating the negative effects of perceived parental favouritism. Creating a supportive and understanding home environment begins with parents who model empathetic behaviour and encourage their children to do the same. This approach can foster more harmonious sibling relationships and potentially mitigate the adverse effects of PDT. Sibling relationships hold significant influence and longevity among all interpersonal connections, offering opportunities for social interaction, collaborative learning, and the development of a stronger sense of self ([Souers & Hall, 2018](#)). Positive sibling interactions are characterised by mutual support and affection, whereas tensions often arise due to rivalry, jealousy, and a lack of appreciation.

PDT and "Empathy" play pivotal roles in shaping the quality of sibling relationships. This study posits that equitable parental treatment and a nurturing family environment promote strong sibling bonds. Conversely, pronounced disparities in parental attention can heighten competition and conflict among siblings, particularly in the absence of empathy ([Mohiuddin, 2022](#)). The interplay between PDT, "Empathy," and sibling dynamics is complex and evolves over time. The way children perceive parental treatment largely determines whether the stress caused by PDT leads to improved or strained sibling relationships. A child's capacity for empathy mediates the link between their perception of parental treatment and their response to it ([McClellan et al., 2024](#)). Positive sibling relationships are more likely to develop in households where PDT is perceived as fair, even if empathy levels are low, as siblings may accept and even embrace unequal treatment in such contexts.

In households where PDT is perceived as unfair or emotionally distant, unequal treatment exacerbates rivalry and conflict among siblings. Sibling interactions typically arise from shared familial bonds or close companionship, making siblings a significant influence on an individual's development ([Truchon, 2015](#)). Parent-child dynamics, such as PDT and attachment styles, play a critical role in shaping "Sibling Relationships," alongside sibling-specific factors like "Empathy," intellect, and perspective. This study adopts a paradigm rooted in social comparison theory and social learning theory to explore the development of "Sibling Relationships." The first segment examines the impact of "Empathy" on "Sibling Relationships" through the lens of social learning theory ([Iftikhar & Sajjad, 2023](#)). The second segment applies social comparison theory to investigate how PDT influences sibling dynamics. Ultimately, the research synthesises these perspectives to offer recommendations and insights into the developmental processes of "Sibling Relationships." The primary objectives of this study are:

- "To examine the impact of "Sibling Relationships" on perceived parental affection differential treatment."
- "To investigate the role of sibling "Empathy" in moderating the relationship between "Sibling Relationships" and perceived parental affection differential treatment."
- "To analyze the direct and indirect effects of "Sibling Relationships" on perceived parental affection differential treatment, with sibling "Empathy" as a mediating variable."

The following research questions have been formulated in alignment with the objectives of this study:

- “How do “Sibling Relationships” impact perceived parental affection differential treatment?”
- “Does sibling “Empathy” moderate the relationship between “Sibling Relationships” and perceived parental affection differential treatment?”
- “What are the direct and indirect effects of “Sibling Relationships” on perceived parental affection differential treatment, considering sibling “Empathy” as a mediating variable?”

Literature Review

“The Concept of Sibling Relationship”

In traditional family structures, a "sibling relationship" refers to the bond shared by children born to the same biological parents. [Howe et al. \(2022\)](#) describe this relationship as requiring an awareness of each other's presence and utilising a combination of verbal, written, and nonverbal communication to express a wide range of thoughts, emotions, perspectives, beliefs, and emotional responses. Sibling relationships are among the most enduring and influential connections in a person's life. Regardless of whether siblings maintain regular communication, their existence remains impactful. To gain a deeper understanding of the complexities of sibling relationships, [Plamondon, Bouchard and Lachance-Grzela \(2021\)](#) proposed theoretical frameworks grounded in interpersonal comparison and social learning theories. According to social learning theory, sibling bonds are shaped through processes such as observational imitation and reinforcement learning. The social and cognitive development of younger siblings can often be predicted by examining the behaviour and influence of their older siblings. However, in multi-sibling households, parental favouritism and unequal attention heighten children's awareness of competition for familial resources. [McHale, Updegraff and Feinberg \(2016\)](#) observed that this often fosters rivalry and jealousy among siblings, leading to conflict. Siblings frequently resolve conflicts independently, without parental involvement, which further defines their unique dynamic. Additionally, "Sibling Relationships" create a distinct context where siblings can influence each other's cognitive, emotional, and behavioural development. The combination of enduring friendship, shared familial experiences, and divergent interests and needs often produces profound emotional connections, characterised by either deep affection or "love-hate" tensions.

“Sibling Relationships” play a crucial role in personal development, comparable to the bond between parents and children. Unlike parental relationships, sibling interactions have a distinct impact on social development. [Petalas et al. \(2015\)](#) classify sibling relationships into three types: warm, conflicting, and competitive. Sibling conflict can predict problematic behaviours in adolescents, such as aggression, alcohol misuse, and risky sexual behaviour, while sibling warmth negatively predicts emotional issues and is linked to lower depression levels in teens. Positive sibling relationships also support cognitive development, enabling adolescents to solve interpersonal issues effectively and fostering prosocial behaviours in younger children ([Kramer & Hamilton, 2019](#)). Younger siblings' prosocial actions may reflect the influence of their elder siblings. Furthermore, “Sibling Relationships” impact long-term quality of life. [Panchakshari and Siddaraju \(2024\)](#) found that among male Harvard alumni aged 65+, sibling relationships were the strongest predictor of happiness in a 45-year longitudinal study. Recognising their influence on behavioural disorders, emotional health, prosocial behaviours, and overall quality of life is essential.

“Empathy” and Sibling Relationship

Although various definitions of "Empathy" exist, none have achieved universal acceptance. However, scholars generally agree on two key attributes: (1) "Empathy" involves an outward-focused response to the emotional state or needs of others, and (2) it requires emotional alignment, where individuals share or mirror others' feelings ([Gungordu & Hernandez-Reif, 2022](#)). Thus, "Empathy" is broadly understood as a mental state in which one adopts the emotions and experiences of another. This encompasses both intellectual "empathy," which involves understanding others' feelings, and emotional "empathy," which involves experiencing those emotions ([Jambon et al., 2019](#)). From an early age, siblings engage in playful interactions and seek mutual satisfaction, fostering attention and understanding that may support the development of "Empathy." As a result, a lasting connection between "Empathy" and "Sibling Relationships" may exist. During formative years, individuals who maintain supportive sibling relationships often demonstrate greater empathic abilities and an enhanced capacity to understand others' perspectives.

Research on American adolescents aged 7 to 14 has shown that stronger sibling attachment and reduced rivalry above normative levels are linked to increased displays of empathy, even when accounting for parental behaviour and marital relationship quality (Shivers & Dykens, 2017). Among adult women, both the emotional and cognitive dimensions of empathy are strongly associated with sisterly relationships. Empathy and warmth are inherently connected, with empathy strengthening sibling bonds over time. Social learning theory provides valuable insights into the connection between "Empathy" and sibling relationships. Stern and Cassidy (2018) emphasised the significant role of elder siblings in shaping their younger siblings' empathy through social mediation. Older siblings, often more skilled and experienced, tend to display empathy and care, setting a model for their younger siblings. Younger siblings are more likely to imitate their elder siblings' behaviours, learning empathy through observation. Acts of kindness by elder siblings have a profound impact on younger siblings' capacity for empathy, shaping the dynamics of their relationship. However, Rea et al. (2022) found that younger siblings are more influenced by nurturing sibling ties in the development of empathy compared to older siblings.

The relationship between sibling bonds and cognitive development is a complex, bidirectional process. Contemporary socialisation theories emphasise the reciprocal nature of family dynamics, suggesting that younger siblings influence their older siblings just as much as the reverse. D'Amen, Succi and Santini (2021) assert that the traits and behaviours of younger siblings can shape the caregiving abilities of older siblings, with kindness and understanding from younger siblings fostering similar qualities in their elders. Even by the age of two, young children demonstrate significant social capacities. According to social learning theory, empathy among siblings is a mutual force shaping their relationship. The "Empathy" of older siblings influences younger siblings, while the "Empathy" of younger siblings also affects their older counterparts, highlighting the reciprocal nature of their emotional development.

“Parental Differential Treatment” and “Sibling Relationships”

Parental and sibling relationships are integral components of the family structure, with each subsystem influencing and interacting with the others. Emotional and behavioural changes can affect various family subsystems. Finzi-Dottan and Cohen (2018) argue that these emotional shifts may occur both within individuals and between them. Extensive research demonstrates that a strong relationship between parents and children is associated with positive sibling interactions and negatively correlates with sibling conflict across different age groups, from childhood to adulthood. Studies on two-child households reveal unique dynamics in the parent-child bond. Additionally, Stocker et al. (2020) found that the impact on "Sibling Relationships" is "non-linear," with maternal acceptance of a second-born child more strongly linked to the quality of the sibling bond. The relationship between parents and the firstborn often predicts future sibling dynamics. Brody, Stoneman and McCoy (2017) concluded that parent-child relationships do not directly determine sibling relationships; instead, PDT plays a significant role. PDT refers to the unequal distribution of affection, attention, or discipline by parents towards their children, encompassing both affection-based parental favouritism and discipline-based favouritism. According to social comparison theory, children who perceive their parents as favouring one sibling over another may experience negative emotions, such as jealousy and frustration, which in turn deteriorates their relationships with both parents and siblings.

The negative effects of inequities within the parent-child relationship often extend to sibling dynamics, suggesting that disproportionate parental favouritism can weaken sibling bonds (Hughes, McHarg, & White, 2018). Many studies not only link increased parental affection and reduced parental control with parental favouritism but also interpret these disparities as having significant implications for "Sibling Relationships" and individual development (Smorti & Ponti, 2018). For instance, children who are not spoiled tend to exhibit higher aggression and hostility, more conflict-ridden sibling relationships, poorer adjustment, riskier behaviours, and fewer prosocial behaviours. Conversely, children who perceive themselves as favoured by their parents experience less sibling discord, improved interactions with siblings, and fewer problematic or externalising behaviours. Sibling rivalry may be alleviated when children recognise an imbalance in parental affection, but it can also lead to heightened conflicts when children perceive unfair favouritism towards their siblings (Killoren et al., 2015). Therefore, the impact of uneven parenting on sibling relationships largely depends on how much children recognise these discrepancies.

The nature of PDT is crucial in assessing its impact on sibling interactions. PDT consists of two key elements: affection and discipline (Sahithya, Manohari, & Vijaya, 2019). Sibling rivalry, particularly for the less

favoured child, is a common consequence of overt parental favouritism. However, there is ongoing debate about whether children perceive parental favouritism or equality as more supportive of sibling bonds. Research links parental favouritism to reduced control and increased affection for one sibling, with these variations affecting "Sibling Relationships" and individual development. Grigoryeva (2017) found that siblings tend to have stronger relationships when they feel preferred by their parents. However, the impact of differential punishment on sibling relationships remains unclear. In families where one child receives more discipline than the other, this was not consistently linked to family conflict or negative behaviour. Garcia et al. (2019) explained that parents may view punishment and control as appropriate for older, more capable children, suggesting that differential treatment based on age or gender could reduce sibling rivalry. While the effects of different parenting styles on "Sibling Relationships" remain uncertain, they appear to diverge from the effects of varying parenting styles on affection.

“Mediating Effect of “Empathy” On the Relationship Between “Parental Differential Treatment” and Sibling Relationship”

The previous discussion highlights the impact of PDT and "Empathy" on "Sibling Relationships," but further exploration of their connection is necessary. A study conducted in China found that "Sibling Relationships" among school-aged children were positively correlated with children's perceptions of unequal parental affection, yet PDT itself had no direct correlation with the quality of sibling bonds. This suggests the presence of intervening factors between parental treatment and sibling relationships. Family dynamics likely influence the development of children's empathy, a key factor in forming personal connections. One possible explanation for the link between PDT and "Sibling Relationships" is that "Empathy" serves as a mediating factor. Our findings suggest that the relationship between unequal parental treatment and sibling interactions is influenced by the siblings' ability to empathise. Figure 1 illustrates this concept with an example of a two-child family, demonstrating how sibling relationships may improve when parents apply more consistent emotional differential treatment towards their children.

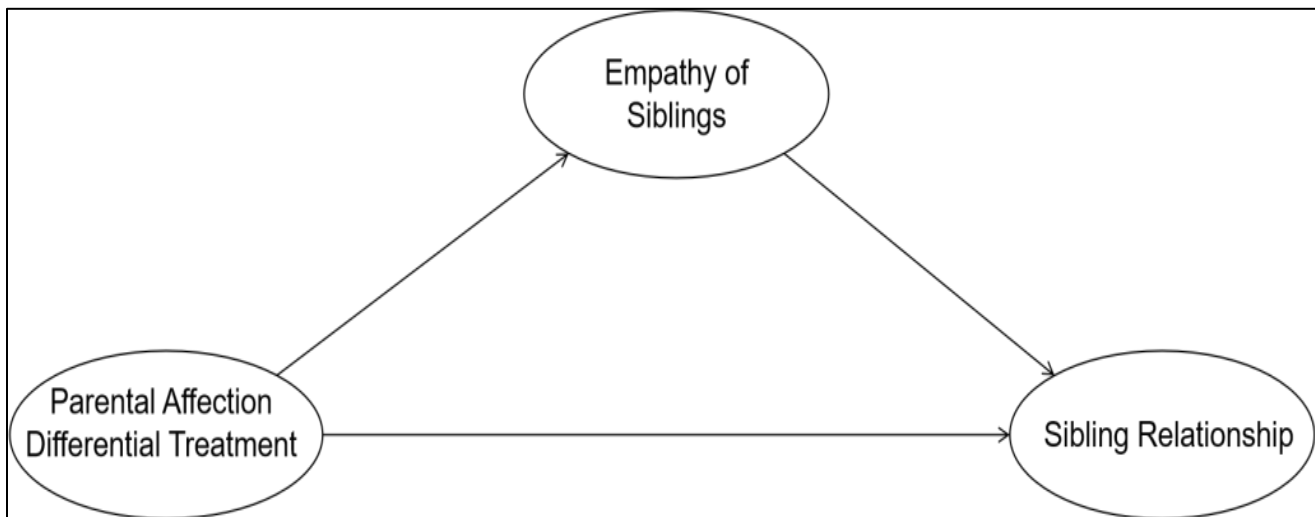


Figure 1: *The Model of Relationship between Parental Affection Differential Treatment, “Empathy” of Sibling and Sibling Relationship.*

Complex factors such as parental emotional treatment, gender inequality, and age differences all shape how siblings respond to parental punitive inequality. Children who feel loved by their parents may interpret discipline as a form of affection, fostering empathy and strengthening sibling bonds. In contrast, children who feel less loved may view parental control as a hindrance to their personal development, leading to emotional distress and a reduced capacity for empathy, which can weaken sibling relationships. Additionally, parents' disciplinary approaches may vary based on the gender and age of their children. Therefore, when examining the effects of "Parental Differential Treatment" on "Sibling Relationships," it is crucial to consider the children's ages and the parents' gender. The mediator in this process is "sibling empathy." Figure 2 illustrates this concept within two-child households.

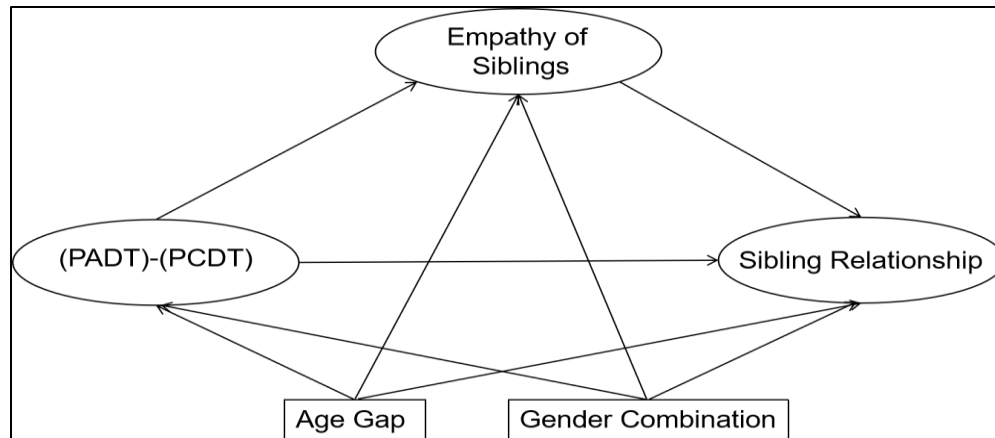


Figure 2: The Relationship Model Including "Parental Differential Treatment" via Affection, "Parental Differential Treatment" through Discipline, Sibling Empathy, Sibling Relationship, Age Gap, and Gender Mixing. **Note:** *PADT denotes "Parental Differential Treatment" about affection, whereas PCDT signifies "Parental Differential Treatment" regarding punishment.

Methodology

Methodology of Research

This study employed a quantitative methodology to assess the relationships between "Parental Differential Treatment," siblings' "Empathy," and sibling relationships. This approach enables the measurement of these variables, providing a solid analytical foundation for identifying patterns and trends. As a primary study, its objective is to explore the interrelationships among the specified variables. The correlational method is particularly suited for examining the strength and direction of associations between these variables without manipulating them.

Data Collection

The study's purpose guided the selection of 100 respondents for the sample, with each of the three age groups—"18-22 years (38%)," "22-26 years (32%)," and "26-30 years (30%)"—comprising 60 men and 40 women, ensuring a balanced gender ratio. Participants were required to be within the specified age range and have at least one sibling. A web-based survey was used to collect data from the participants. The questionnaire included demographic questions on age and gender, alongside three measures to assess the relevant qualities under investigation.

"Parental Affection Differential Treatment (PADT) Scale"

This instrument consists of five items rated on a Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). It assesses parental views on various expressions of love, quality time, leniency, support, and praise directed towards their children.

"Empathy" of Sibling (ES) Scale

This measure consists of five questions rated on a Likert scale from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). It assesses the extent to which siblings understand, support, and respond to each other's emotional needs.

Sibling Relationship (SR) Scale

This instrument consists of five items rated on a Likert scale from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). It evaluates closeness, trust, quality time, conflict resolution, and loyalty within sibling relationships. The reliability of these measures was confirmed using Cronbach's Alpha, yielding values of ".932," ".934," and ".928," which indicate strong internal consistency.

Data Analysis

To ensure a comprehensive understanding of the interrelationships among the variables, data analysis involved several steps. The sample characteristics were defined by calculating frequencies, percentages, and cumulative percentages of the demographic variables. The reliability of the instruments was assessed by computing Cronbach's Alpha for each scale. To explore the relationships among PADT, ES, and SR, Pearson correlation coefficients were calculated, with a significance threshold set at 0.01. Mediation analysis was conducted using Andrew F. Hayes's PROCESS macro for SPSS, Version 4.1. Model 4 of the PROCESS macro was employed to examine the mediating role of sibling ES in the relationship between SR and PADT. This approach allowed for the assessment of both the total, direct, and indirect effects of SR on PADT, with Bootstrap confidence intervals used to determine the significance of the indirect effects.

Ethical Considerations

To ensure ethical conduct, clearance was obtained from the relevant institutional review board prior to the research. Participants provided informed consent before participating in the study. They were informed about the study's objectives, the voluntary nature of their involvement, and their right to withdraw at any time without facing any consequences. Confidentiality and anonymity were assured to encourage honest and accurate responses.

Results and Discussion

This chapter aims to analyse survey data to determine the association among various psychosocial characteristics within the familial context. The analysis includes an examination of the respondent profile, the reliability of the measuring scales, inter-construct relationships, and mediation to clarify the connections between these factors.

Descriptive Statistics

The survey included 100 respondents, with 60 identifying as male and 40 as female. This distribution shows that 60% of the participants are male, while 40% are female. The cumulative percentage indicates that, by adding the female respondents, the total reaches 100%. This clear division underscores a male-dominated respondent pool, with males comprising the majority, but ensuring both genders are well-represented in the survey results.

Table 1: Gender of Respondents.

		“Gender of Respondents”			
		“Frequency”	“Percent”	“Valid” “Percent”	Cumulative “Percent”
“Valid”	“Male”	“60”	“60.0”	“60.0”	“60.0”
	“Female”	“40”	“40.0”	“40.0”	“100.0”
	“Total”	“100”	“100.0”	“100.0”	“100”

The age distribution of the 100 survey respondents shows that the largest group is those between 18-22 years, representing 38%. The 22-26-year group accounts for 32%, while the 26-30-year group makes up 30% of the respondents. The cumulative percentages sum to 100%, with the oldest age group included. This distribution indicates that the company's target audience is almost evenly spread across the three age groups, although the 18-22 age group is slightly more dominant.

Table 2: “Age Group of Respondents”

		“Age Group of Respondents”			
		“Frequency”	“Percent”	“Valid” “Percent”	Cumulative “Percent”
“Valid”	“8-22 Years Old”	“38”	“38.0”	“38.0”	“38.0”
	“22-26 Years Old”	“32”	“32.0”	“32.0”	“70.0”
	“26-30 Years Old”	“30”	“30.0”	“30.0”	“100.0”
	Total	“100”	“100.0”	“100.0”	“100”

Reliability Analysis**Scale: Parental Affection Differential Treatment**

The Parental Affection Differential Treatment scale yielded a Cronbach's Alpha of 0.932, indicating a high level of internal consistency. This strong alpha value suggests that the items on the scale are closely related and effectively measure the same construct. The similarity in the responses also supports the validity of the scale in assessing perceived parental favouritism in affection. Such robust internal consistency ensures that the scale provides reliable and accurate measurements, making it well-suited for research in this area.

Table 3: Parental Affection Differential Treatment.

“Reliability Statistics”	
Cronbach's Alpha	“N of Items”
.932	5

Scale: “Empathy” of Sibling

The “Empathy” of Sibling scale produced a Cronbach's Alpha of 0.934, reflecting excellent internal consistency. This high value indicates that the items on the scale are closely aligned and effectively capture the phenomenon of "Empathy" in the context of "Sibling Relationships." An alpha above 0.8 suggests that the items are homogeneous and reliably measure "Empathy" between siblings. This consistency is crucial for research aiming to examine and quantify trends in sibling empathy, providing confidence in the validity and accuracy of the results generated by this scale.

Table 4: “Empathy” of Sibling.

“Reliability Statistics”	
Cronbach's “Alpha”	“N of Items”
“.934”	“5”

Scale: Sibling Relationship

The Sibling Relationship scale also exhibited strong internal consistency, with a Cronbach's Alpha of 0.928. This high value indicates that the items on this scale are closely related and, when combined, effectively measure the quality and changes in sibling relationships. Such a level of internal consistency is reassuring and supports the scale's validity and reliability in assessing sibling relationship quality. In research exploring various aspects of sibling dynamics and their impact, this reliability is crucial. In summary, all three scales demonstrated excellent internal consistency, with Cronbach's Alpha coefficients above 0.92. This suggests that the items within these scales adequately measure the intended constructs, making them highly suitable for research on parental affection, sibling empathy, and sibling relationships.

Table 5: Sibling Relationship.

“Reliability Statistics”	
“Cronbach's Alpha”	“N of Items”
“.928”	“5”

“Correlation Analysis”

The correlation analysis reveals strong and statistically significant relationships among the three scales: Parental Affection Differential Treatment, Sibling Empathy, and Sibling Relationships, all positively correlated at the 0.01 significance level (2-tailed). Specifically, Parental Affection Differential Treatment is positively correlated with Sibling Empathy ($r = .931$) and Sibling Relationships ($r = .936$). Additionally, Sibling Empathy is strongly correlated with the quality of Sibling Relationships ($r = .934$), indicating that higher empathy among siblings is associated with better sibling dynamics. These high correlation values (all above 0.93) underscore the substantial interconnections between parental treatment, sibling empathy, and the quality of sibling relationships. This suggests that parental differential treatment plays a crucial role in shaping both sibling empathy and the overall quality of their relationships.

Table 6: Correlations

		“Correlations”		
		Parental Affection Differential Treatment	“Empathy” of Sibling	Sibling Relationship
“Parental Affection Differential Treatment”	“Pearson Correlation”	“1”	“.931**”	“.936**”
	“Sig. (2-tailed)”		“.000”	“.000”
	“N”	“100”	“100”	“100”
“Empathy” of Sibling	“Pearson Correlation”	.931**	“1”	.934**
	“Sig. (2-tailed)”	“.000”		“.000”
	“N”	“100”	“100”	“100”
“Sibling Relationship”	“Pearson Correlation”	“.936**”	“.934**”	“1”
	“Sig. (2-tailed)”	“.000”	.000	
	“N”	“100”	“100”	“100”

** . Correlation is significant at the 0.01 level (2-tailed).

Mediation Analysis

The mediation analysis using the PROCESS approach aimed to determine whether SE mediates the relationship between SR and PADT. The sample size for the study was 100 participants. The first step involved examining the connection between SR and SE. The model summary revealed a strong correlation with an R-squared value of .8727, indicating that 87.27% of the variance in SE is explained by SR. The coefficient for SR was 0.9340, with a t-value of 25.9241 ($p < 0.0000$), demonstrating a highly significant effect.

Table 7: Mediation Analysis.

Run MATRIX procedure: PROCESS Procedure for SPSS Version 4.1
 Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3
 Model: 4
 Y: PADT
 X: SR
 M: ES
 Sample Size: 100

OUTCOME VARIABLE: ES						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
.9342	.8727	.1373	672.0587	1.0000	98.0000	.0000
Model						
coeff	se	t	p	LLCI	ULCI	
constant	.2514	.1401	1.7946	.0758	-.0266	.5294
SR	.9340	.0360	25.9241	.0000	.8625	1.0055
DIRECT AND INDIRECT EFFECT OF X ON Y						
Direct Effect of X on Y						
Effect	se	t	p	LLCI	ULCI	
.5085	.0862	5.8960	.0000	.3373	.6796	
Indirect effect(s) of X on Y:						
Effect	BootSE	BootLLCI	BootULCI			
ES	.3949	.0955	.1952	.5666		
ANALYSIS NOTES AND ERRORS						
Level of confidence for all confidence intervals in output: 95.000						
Number of bootstrap samples for percentile bootstrap confidence intervals: 5000						

OUTCOME VARIABLE: PADT

Model Summary						
R	R-sq	MSE	F	df1	df2	p
.9494	.9014	.1001	443.1631	2.0000	97.0000	.0000
Model						
coeff	se	t	p	LLCI	ULCI	
constant	.2440	.1216	2.0066	.0476	.0027	.4853
SR	.5085	.0862	5.8960	.0000	.3373	.6796
ES	.4228	.0863	4.9022	.0000	.2516	.5940

DIRECT AND INDIRECT EFFECTS OF X ON Y

Next, the model assessing the direct effects of SR and SE on PADT showed an R-squared value of .9014, signifying that 90.14% of the variation in PADT is accounted for by SR and SE combined. Both SR (coefficient = .5085, $t = 5.8960$, $p < .0000$) and SE (coefficient = .4228, $t = 4.9022$, $p < .0000$) had significant positive impacts on PADT. The direct effect of SR on PADT was substantial (coefficient = .5085, $p < .0000$). The indirect effect of SR on PADT via SE was also strong, with a bootstrapped coefficient of .3949 and a 95% confidence interval that excluded zero (BootLLCI = .1952, BootULCI = .5666), confirming the mediation role of SE. These results suggest that SE mediates the relationship between SR and PADT. Specifically, stronger sibling relationships enhance empathy, which in turn reduces perceptions of unequal parental affection, with SR having a significant direct effect on PADT and SE mediating much of this relationship.

Discussion

With Cronbach's Alpha values exceeding 0.92 for the three measuring scales—Parental Love, Favouritism, Sibling Understanding, and Sibling Bond—the study's results confirm the very high reliability of the assessment tools used in the survey. The high internal consistency reflects that the scales have been effectively developed and accurately measure the intended constructs. PADT is described by [Jeannin and Van Leeuwen \(2015\)](#) as the variations in the affection, care, and support that parents show to their children. This differential treatment can have a profound impact on a child's emotional development and the quality of their sibling relationships. Children who perceive unequal affection or support may experience negative emotions such as jealousy, anger, or inadequacy. These feelings can weaken sibling bonds and potentially foster animosity. Conversely, [Brown, Craig and Halberstadt \(2015\)](#) argued that a sibling's empathy can significantly mitigate the adverse effects of PADT. A sibling who is empathetic—attuned to and responsive to the emotional needs of their brother or sister—can reduce feelings of rejection, increase emotional support, and strengthen the sibling connection, despite the unequal parental treatment.

Empathy not only fosters a more supportive and healthier sibling relationship, but as [Hajal and Paley \(2020\)](#) noted, it also buffers the negative impacts of PADT. In cases of imbalance within the parent-child relationship, children can find solace in the affectionate and mutually supportive nature of sibling relationships. On the other hand, long-term exposure to toxic sibling dynamics may exacerbate existing negative emotions, leading to dysfunctional relationships and potentially affecting long-term mental health. Thus, the role of empathy in sibling relationships emerges as a critical factor in navigating the complexities of parental differential treatment. The findings of this study demonstrate that the three dimensions of parental love, differential treatment, sibling empathy, and the quality of sibling relationships are strongly and positively correlated, with all correlations exceeding 0.93. This suggests that unequal parental treatment significantly influences sibling empathy and the overall quality of sibling relationships. Mediation analysis further reveals that empathy within sibling relationships partially mediates the relationship between sibling relationship quality and perceived differentiated parenting.

[Rolan and Marceau \(2018\)](#) highlighted that parental love and favouritism can alter both sibling relationships and their level of empathy. Favouritism, whether intentional or unintentional, involves treating children unequally based on factors such as age, gender, temperament, or personal preference. This unequal treatment can affect the quality of sibling relationships and the development of empathy. According to [Liu and Rahman \(2022\)](#), such differential treatment often results in jealousy and rivalry, particularly when one sibling

perceives another as receiving more affection. The less favoured child may suffer from diminished self-esteem and may become hostile towards their sibling, further damaging the sibling relationship and hindering cooperation. However, the "empathy" of siblings plays a crucial role in moderating these effects. Mota and Matos (2015) noted that in families with higher levels of sibling empathy, siblings are more likely to protect and support each other, thereby reducing the negative impact of differential parenting. For example, a compassionate sibling who notices their brother or sister being left out might intervene, fostering social inclusion and reinforcing the sibling bond. Sibling attachment, as a reciprocal process shaped by both parental treatment and the empathetic responses of siblings, can provide a protective buffer against the detrimental effects of parental favouritism. When sibling bonds are strong and their emotional needs are considered, they can serve as a safeguard against the negative consequences of unfair parental preference.

Conclusion

This research highlights the complex relationship between PDT, "Empathy," and sibling relationships. It reveals that "Empathy" can mitigate the negative effects of PDT, underscoring the importance of fair treatment by parents. The study suggests that parents can use empathy and an understanding of justice to foster better interactions with their children, thus improving their emotional well-being. The findings also call for future research to explore these dynamics across different cultures and family structures, to broaden the applicability of the results and integrate these insights into practical interventions. The study confirms the reliability and validity of the assessment scales used for measuring PDT, sibling empathy, and sibling relationships, as indicated by Cronbach's Alpha values above .92 for all measures. The strong correlations (all exceeding .93) between these dimensions suggest that parental treatment plays a crucial role in shaping sibling empathy and the overall quality of sibling relationships. The study aligns with social learning and social comparison theories, which propose that children's perceptions of parental fairness and their empathy skills influence how they treat their siblings. Mediation analysis reveals that sibling empathy partially mediates the link between sibling relationships and PDT, indicating that stronger sibling bonds foster greater empathy, which in turn reduces perceived parental favouritism. This underscores the critical role of empathy as a protective factor against the harmful effects of PDT on sibling relationships.

Implications

The research highlights the importance of parents being mindful of how their children perceive differential treatment, as feelings of unfairness can lead to jealousy and hostility. To promote harmony, parents should avoid favouritism and provide equal care. The study also emphasizes the value of fostering "Empathy" within families. Children with higher empathy are better able to handle differential treatment, reducing conflicts. This suggests that empathy training and emotional intelligence should be incorporated into parenting programs to improve sibling relationships and family dynamics.

Future Directions

The study suggests several future research directions. First, conducting longitudinal studies could provide insights into the long-term effects of PDT and sibling empathy on sibling relationships and family dynamics. Second, investigating the role of cultural factors in shaping perceptions of PDT and empathy could help develop culturally relevant programs. Lastly, expanding the sample to include diverse family structures, such as single-parent or stepfamilies, may offer a broader understanding of family dynamics and sibling interactions across different contexts.

Practical Applications

The study's findings offer valuable insights for family therapists, counsellors, and educators. To improve sibling relationships, it is important to address the effects of perceived favouritism and promote empathy among siblings. Educating parents about the impacts of PDT and how to manage it fairly could be beneficial. Additionally, incorporating empathy-building activities in family therapy and educational settings can enhance the quality of sibling relationships and overall family dynamics.

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