

## Sibling Relationship Among Twins and Singletons

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### ABSTRACT

*Sibling relationship among 39 pairs of twins and 78 singletons was studied during 2015. The respondents selected for the study were belonging to 10-24 years age range from Hubli and Dharwad cities. The self structured schedule was used to gather personal information. The sibling relationship was assessed by using Sibling Relationship Checklist (SRC) developed by Lord and Borthwicks. The results revealed that there were significant differences between twins and singletons as well as monozygotic and dizygotic twins. This indicted that twins specially monozygotic twins had more healthier sibling relationship than singletons. There was significant difference was observed between singleton sibling one and two but not among twin one and two. It showed that, sibling one had slightly higher sibling relationship than sibling two. Among both twins and singletons females were had more healthy relationship than the males. Genetic relatedness, same age individuals and sharing of common environment before and after birth, same home and school environment may add to healthy sibling relationship among twins.*

**Key words:** Twins, Singletons and Sibling relationship.

### INTRODUCTION

Twins are two offspring's produced by the same pregnancy. Twin births are relatively rare event across the human population. The fraternal or dizygotic (DZ) and identical or monozygotic (MZ) are the two types of twins. The difference between the two types of twins depends on the fertilization of egg after conception. The fertilization of two separate eggs resulting in dizygotic twins and the fertilization of a single egg that later split in two, resulting in monozygotic twins. This difference in fertilization results in sharing an average of 50 per cent of their genetic material among dizygotic twins (much like non-twin

full siblings) and the sharing 100 per cent of their genetic material among monozygotic twins. A close relationship with sibling is something to value. Sibling relationship has a unique contribution to make our understandings of family relationships as a whole. For twins however, the expectations are a lot higher due to the beliefs implicit on the twin. Many assume throughout their lives, twins will feel closer to each other than anyone else. The nature and importance of sibling relationships vary for individuals, depending on their own circumstances and developmental stage.

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While twinship may be the closest relationship possible between two people. The close twin relationship has been called by names such as co-twin dependence, twinning bond and twinning reaction<sup>7</sup>. Hence the relationship between twins is something differs from non twin sibling relationship.

Twin relationship is a unique phenomenon that has a profound impact on the upbringing and development of the twin children. Being born together and sharing the same milestones throughout life is not something that most of us singletons will ever truly relate to. Twins are likely to behave like best friends. Twins do indeed share something special. It seems that there is even varying degrees of closeness depending on the type of twin pair. Identical twin girls appear to have the strongest bond than the fraternal boy/girl. This makes sense as twins; tend to forge the strongest relationships with each other. Thus for twin children, the social context of growing up alongside a sibling of the same age may alter normal patterns of interactions with others, within and beyond the family context.

Thus, the present study was conducted to explore “sibling relationship among twins and singletons”.

#### MATERIAL AND METHODS

The present study was conducted among 39 twin pairs (16 monozygotic pairs and 23 dizygotic pairs) and 78 singletons from Hubli and Dharwad cities. A snow ball sampling method was used for the selection of unmarried twins and singletons for the study. The respondent's age ranged from 10 to 24 years. The self structured schedule was used to gather personal information. Zygosity was assessed based on the physical similarities like height, weight, skin color, hair color *etc.*

Sibling Relationship Checklist (SRC) developed by Lord and Borthwicks<sup>9</sup> was used to assess the sibling relationship among twins and singletons. The checklist can be used for observing and describing in concrete terms how siblings relate to each other. It was recommended that it be used in conjunction with other sibling assessment. Checklists first

and second of the SRC contain a series of 13 specific questions numbered A-M. Questions A-I represent positive behaviors (e.g. Defends and protects the sibling) and questions J-M represent negative behaviors (e.g. shows hostility or aggression). It is a three point likert scale (1= always, 2= sometimes true and 3= never). The total score ranges from 13 to 39. A score of 13 to 26 indicates healthy sibling relationship and 27 to 39 indicates unhealthy sibling relationship.

#### RESULTS AND DISCUSION

The personal characteristics of the twins and singletons included gender and age are presented in Table 1. Among monozygotic twins 56.25 per cent are females and remaining (43.75%) males. Among dizygotic twins 56.52 per cent are males and remaining females. Among singletons 61.54 per cent are females and 38.46 per cent are males. Totally 55.13 per cent are females and 44.87 are males in the study.

With respect to age, among monozygotic twins, 43.75 per cent of them belonged to adolescents (13-18 years) group and 31.25 per cent were belonged to young adulthood (19-24 years) group and 25 per cent belonged to late childhood (10-12 years) group. Among dizygotic, 52.18 per cent of them belonged to adolescents group followed by 30.43 per cent were in late childhood and 17.39 per cent were in young adulthood group. Among singletons, 47.43 per cent of them belonged to adolescents group followed by 32.05 per cent to late childhood and 20.51 per cent to young adulthood. Totally 48.09 per cent, 30.12 per cent and 21.79 per cent were belonged to adolescents, late childhood and young adulthood group respectively.

Distribution and comparison of twins and singletons by dimensions of sibling relationship presented in the Table 2a and 2b respectively. On the dimensions of sibling relationship, it was found that majority of respondents from both twins and singletons had healthy relationship (83.30 % and 74.40 % respectively). Whereas 16.70 per cent of twins and 25.60 per cent of singletons had unhealthy

relationship. There was non significant association was found between twins and singletons. On the whole it was observed that 78.8 per cent of respondents showed healthy sibling relationship. However, when mean values were compared, there was a highly significant difference was found between twins (21.02) and singletons (23.60) indicating that lower mean scores of twins highlights healthy sibling relationship than the singletons. This difference might be because, twins are genetically more similar than singletons. Their genetic relatedness is more as compare to singletons. Fraley and Tancredy<sup>6</sup> found that siblings who share a grater proportions of genes (e.g. twins) are more likely to use one another as attachment figure than the others siblings (e.g. non-twin sibling and adoptive siblings). As twins belong to same age which also influences their sibling relationship. The features like same age level, sharing of common environment before and after birth, same home and school environment may add to healthy sibling relationship among twins. Twins are more likely to behave like best friends. Anisworth<sup>1</sup> reported that twin siblings were form more attachment relationship because they likely act as playmates. Playfair<sup>11</sup> also reported that twins are the same age individual represents the exceptionally special sibling bond and intimation. Similar to the other findings, Traneredy and Fraley<sup>12</sup> stated that “twin situation” naturally encourages the development of a secure attachment bond, they form distinctively close relationship in comparison to non-twin siblings, due to circumstances such as sharing birthdays, peer group and bed rooms, spending a lot of time in proximity to one another and live like peers.

Distribution and comparison of monozygotic and dizygotic twins by sibling relationship are presented in the Table 3a and 3b respectively. It was found that majority of monozygotic and dizygotic twins had healthy relationship (93.80 % and 76.10 % respectively). Whereas, 6.20 per cent of monozygotic and 23.10 per cent of dizygotic twins were had unhealthy relationship. On the whole 83.30 per cent of them indicating

healthy sibling relationship and significant association between monozygotic and dizygotic twins.

There was highly significant difference observed between monozygotic (18.56) and dizygotic (22.97) twins indicating that monozygotic twins had better healthy relationship than the dizygotic twins. Identical twins share 100 per cent of their genetic material whereas fraternal twins share 50 per cent. This genetic relatedness makes the monozygotic twins more physically similar than zygotic twins. Cassell<sup>4</sup> reported that identical twins are genetically clones of one another and they will immediately have more in common physical similarities that making them to become attached and stay attached throughout their lives. Bacon<sup>2</sup> also reported that identical twins perceive co-twin to be an extension of themselves because they look more similar than fraternal twins. Monozygotic twins are always being a same sex twins but zygotic twins can be opposite sex twins. This gender difference may also effects the sibling relationship among twins. Cohen<sup>5</sup> who revealed that from a comparative study on monozygotic and dizygotic twins, which showed that monozygotic twins had more intimate bond than opposite sex twins. McGuire and Segal<sup>10</sup> also found the main effect of sex, indicating that same sex twins were closer and experienced fewer conflicts than mixed sex twins.

Table 4a and 4b illustrates the comparison of sibling relationship between twins and singletons. Among monozygotic twin 1 and 2 were almost similar (18.75 and 18.37 respectively) in sibling relationship. But in case of dizygotic twins, twin one had slightly higher sibling relationship (22.86) than twin two (23.88). The similar trend was observed among sibling 1 (23.14) and sibling 2 (25.79) of singetons. It was interesting to note that the significant difference was observed among singleton siblings. Klein<sup>8</sup>, reported that bond between twins begin in uterus and develops coconsciously and unconsciously throughout their life but it was not much among singletons.

The results of gender wise distribution and comparison of sibling relationship are presented in the Table 5a and 5b respectively. Majority of both male and females had healthy relationship (82.50 % and 84.20 % respectively) among twins. Whereas 17.50 per cent of males and 15.80 per cent of females were had unhealthy relationship. Similarly in singletons, it was observed that majority of both males and females were had healthy relationship (60 % and 83.30 % respectively). Whereas 40 per cent of male and 16.70 per cent of females were had unhealthy relationship. The significant association between was found male and female in singleton group but not in the twins. Similarly

by comparing mean values, it was observed that, among females of twins and singletons had healthy sibling relationship than the males. However, gender wise highly significant difference was observed among singletons but not among the twins. Similar to the present findings, Thrope and Gardner<sup>13</sup> reported that female twins are closer than male twins. Buist *et al.*<sup>3</sup> also reported that sisters have a significantly greater attachment to each other than brothers. There was no significant difference was observed between sibling relationship of male and female twins however, females were have more likely to report being co-twin dependent and having a more intimate relationship than males.

**Table 1. Demographic characteristics of twins and singletons**

N=156

Sl. No	Characteristics	Twins (n=78)		Singletons (n=78)	Total
		Monozygotic (n=32)	Dizygotic (n=46)		
1	<b>Gender</b>				
	Male	14 (43.75)	26 (56.52)	30 (38.46)	70 (44.87)
	Female	18 (56.25)	20 (43.48)	48 (61.54)	86 (55.13)
2	<b>Age (yrs)</b>				
	Late childhood (10-12 yrs)	8 (25.00)	14 (30.43)	25 (32.05)	47 (30.12)
	Adolescents (13- 18 yrs)	14 (43.75)	24 (52.18)	37 (47.43)	75 (48.09)
	Young adulthood (19-24 yrs)	10 (31.25)	8 (17.39)	16 (20.51)	34 (21.79)

Figure in parenthesis indicates percentages

**Table 2a. Distribution of twins and singletons by dimensions of sibling relationship**

N=156

Respondents	Sibling relationship		Total	Modified $\chi^2$
	Healthy	Unhealthy		
Twins	65 (83.30)	13 (16.70)	78 (100.0)	1.88 <sup>NS</sup>
Singletons	58 (74.40)	20 (25.60)	78 (100.0)	
Total	123 (78.80)	33 (21.20)	156 (100.0)	

**Table 2b. Comparison of twins and singletons by sibling relationship**

Respondents	Mean $\pm$ SD	t-value
Twins	21.02 $\pm$ 4.49	3.54**
Singletons	23.60 $\pm$ 4.23	

Figure in parenthesis indicates percentages

NS - Non-significant

\*\* - Significant at 0.01 level

**Table 3a. Distribution of monozygotic and dizygotic twins by dimensions of sibling relationship**  
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Zygosity	Sibling relationship		Total	Modified $\chi^2$
	Healthy	Unhealthy		
Monozygotic	30 (93.80)	2 (6.20)	32 (100.0)	4.24**
Dizygotic	35 (76.10)	11 (23.10)	46 (100.0)	
Total	65 (83.30)	13 (16.70)	78 (100.0)	

Table 3b. Comparison of monozygotic and dizygotic twins by sibling relationship

Respondents	Mean $\pm$ SD	t-value
Monozygotic	18.56 $\pm$ 3.48	4.76**
Dizygotic	22.97 $\pm$ 4.36	

Figure in parenthesis indicates percentages

NS - Non-significant

\* - Significant at 0.05 level

\*\* - Significant at 0.01 level

Table 4a. Comparison of sibling relationship between twin one and twin two

Monozygotic twins			
Sibling relationship	Ordinal position	Mean $\pm$ SD	t-value
	Twin 1	18.75 $\pm$ 3.82	0.30 <sup>NS</sup>
	Twin 2	18.37 $\pm$ 3.22	
Dizygotic twins			
Sibling relationship	Twin 1	22.86 $\pm$ 4.54	0.16 <sup>NS</sup>
	Twin 2	23.8.8 $\pm$ 4.27	

Table 4b. Comparison of sibling relationship between singleton siblings one and two

Singleton siblings			
Sibling relationship	Ordinal position	Mean $\pm$ SD	t-value
	Sibling 1	23.14 $\pm$ 3.31	2.10*
	Sibling 2	25.79 $\pm$ 4.37	

NS - Non-significant

\* - Significant at 0.05 level

Table 5a. Gender wise distribution by dimensions of sibling relationship

N= 156

Respondents	Gender	Sibling relationship		Total	Modified $\chi^2$
		Healthy	Unhealthy		
Twins	Male	33 (82.50)	7 (17.50)	40 (100.0)	0.04 <sup>NS</sup>
	Female	32 (84.20)	6 (15.80)	38 (100.0)	
Singletons	Male	18 (60.0)	12 (40.0)	30 (100.0)	5.27*
	Female	40 (83.30)	8 (16.70)	48 (100.0)	

Table 5b. Gender wise comparison by sibling relationship

Respondents	Gender	Mean $\pm$ SD	t-value
Twins	Male	21.85 $\pm$ 4.54	1.36 <sup>NS</sup>
	Female	20.44 $\pm$ 4.51	
Singletons	Male	25.46 $\pm$ 3.24	3.26 <sup>**</sup>
	Female	22.43 $\pm$ 4.38	

Figure in parenthesis indicates percentages

NS - Non-significant

\* - Significant at 0.05 level

\*\* - Significant at 0.01 level

## CONCLUSION

In brief, findings of the present study indicates significant difference was found between twins and singletons as well as monozygotic and dizygotic twins with regard to sibling relationship. However, in between twin one and two there was no significant difference was observed, while singletons had significant difference. Genetic relatedness, same age individuals and sharing of common environment before and after birth, same home and school environment may add to healthy sibling relationship among twins.

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