The International Journal of Indian Psychology
ISSN 2348-5396 (e) | ISSN: 2349-3429 (p)
Volume 6, Issue 2, DIP: 18.01.026/20180602
DOI: 10.25215/0602.026
http://www.ijip.in | April - June, 2018

Research Paper

Understanding Sibling Influences: The Effects of Number of Siblings and Order of Birth on Psycho-Social Behaviour among Adolescents Girls

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ABSTRACT

This study attempts to examine the impact of number of siblings and order of birth on Psycho-social behaviour among Adolescents girls. The group consisted of 1218 adolescents girls in the age group of 13-18 years selected by convenient sampling method. Twelve Government schools were selected from twelve districts of Tamil Nadu. The results found that there is a significant difference between number of siblings and order of birth across the psychological and social factors such as emotional intelligence, resilience, stress, family environment, school problem, social problem and personal problems.

Keywords: *Number of siblings, order of birth, Psychological, Social, adolescent's girls*

British Household Parrel Survey explored the effect on child's educational attainment based on family size and birth order. The result indicated that the children share in family's educational resources decrease with birth order and also children from larger family had lower levels of education. Research on sibling interrelationship explain the social dynamics between them and its impact on youth development. Downey and Conden (2004) in their study found children showed poor social skills in kindergarten who had no siblings Ozabaci (2006) in his study on effects of family size and number of siblings on Emotional Intelligence found that family environment affects development of the ego conflict of the child and his social and emotional development. Sibling relationships are special since they

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Received: April 1, 2018; Revision Received: April 15, 2018; Accepted: May 29, 2018

are involuntary are lifelong (Harup 1974). These bonds formed early turn into social support during adulthood (Castensen 1992).

The impact of birth order on development into adulthood are both negative and positive. Research has indicated that for lower birth order children time spent by parents would be less. Positive effects of birth order on education are that family income increases over time and the older siblings may leave home to provide assistance for younger members of the family. Younger siblings learn from the older one's experience. Parental child raising experience may help in better rearing of the younger ones. The siblings of birth order two onwards are in the family which is larger the first the first born which improves their social skills. Radloff (1961) and Wrightman (1960) provide evidence that first born show greater affective behavior than the later born, further research has indicated first born women under stress exhibit affective on information seeking behavior.

METHODOLOGY

Instrumentation

Perceived Stress Scale (PSS) by Cohen, Kamarck, & Mermelstein (1983) was used to assess the stress among the adolescent girls. This is a 10-item self-administered scale (cronbachα = 0.85) with each item measured on a 5–point Likert scale anchored by 1 = Never, 2 = Almost never, 3 = Sometimes, 4 = Fairly often, 5 =Very often. A five point scale has used for measuring the items for emotional intelligence where 1 is for strongly agree, 2 for disagree, 3 for neither agree nor disagree, 4 for agree and 5 for strongly agree.

The emotional quotient inventory developed by Bar-On (1997) was used to measure emotional intelligence (α = 0.70).This tool is a self- reported questionnaire, that consists of 66 items which measures ten different components of emotional intelligence viz; Self-regard, Interpersonal relationship, Impulse control, Problem solving, Emotional- self- awareness, Flexibility, Reality testing, Stress-tolerance, Assertiveness, Empathy. The items under each component were pooled to constitute the emotional intelligence scale. Each item was measured on a 5 – point scale with anchored by 1 = not true, 2 = seldom true, 3 = sometime true, 4 = often true and 5 = true.

Resilience scale (α = 0.779) was adopted from Wagnild & Young (1993). This is a self-reported questionnaire that consisted of 25 items each measured on a 5 - point scale anchored by 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree.

The Family Environment Scale (α = 0.8012) was adopted from Moos & Moos (1987). This scale consisted of three major dimensions such as relationship, personal growth and system maintenance. The items under each dimension were pooled to constitute the family environment scale. This is a self – reported questionnaire with 46 items each measured on a

5 - point scale anchored by 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree.

Personal problem, school problem and social problem were measured using a self-reported questionnaire adopted from the Youth Problem Inventory developed by Verma (1975). Personal problem ($\alpha = 0.862$) was measured using a 20 – item 5-point scale. Social problem ($\alpha = 0.701$) was measured using a 5 – item 5-point scale and school problem ($\alpha = 0.848$) measured using a 17-item 5 – point scale. Each item was anchored by 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree.

The adolescent girls hailed from the remotest part of Tamilnadu and hence, the authors suspected that they might not have the ability to read the English version of the questionnaire. Questionnaire was translated into the regional language 'Tamil' to facilitate the subjects to understand easily and answer effectively. The translation was validated by Tamil Scholars.

Sample

Survey data were collected from 1218 female adolescents in the age group 13-18 years. The researcher adopted a convenient sampling method. Twelve Government schools were selected from twelve districts in Tamil Nadu. It included both Co-education and Girls' exclusive school. The questionnaires were administered in person. Before administering the questionnaire, the Principal or the Head Master of the Schools were briefed upon the intention of the study. A thorough follow-up was done to expedite the process of filling up the questionnaire. Out of 1353 questionnaires distributed, 1218 were usable and complete yielding a response rate of 90.22%. This was believed to be a highly reasonable sample size.

RESULTS AND DISCUSSIONS

Hypothesis 1 (H1): There is no significant difference on the psychological and sociological problems across number of siblings of the adolescents.

As mentioned above, this objective is studied using MANOVA. The variables that entered the MANOVA model are number of siblings, emotional intelligence, stress, resilience, school problem, personal problem, social problem and family environmental system.

There are four different test statistics namely, Pillai's trace, Wilk's Lambda, Hotelling-Lawley's trace and Roy's Greatest Root, each with its own associated *F* statistic. In this case, Pillai's Trace is the most robust of the four tests and hence it is used. A significance feature of this MANOVA design is that, all the four test statistic give almost identical F values except Roy's Largest Root.

The table-1 below shows the results. To determine the significance of the omnibus test, taking the composite of all the psychological and sociological factors, the researcher examined the *F* - static, and the significance value *p*. On examination of the table-1, it is

found that *F* – static is significant at $p = 0.1$. This means hypothesis H3 is rejected, there is a significant difference between number of siblings across the psychological and sociological factors. Pillai's Trace = 0.032, F (28, 4840) = 1.405, $p = 0.076$ (< 0.1).

Table: 1 Multivariate Tests for number of siblings with Emotional Intelligence, Stress, Resilience, School Problem, Family Environment, Social Problem and Personal Problem

Effect		Value	F	Hypothesis df	Error df	Sig.
No of siblings	Pillai's Trace	.032	1.40	28.00	4840.00	.076
	Wilks' Lambda	.968	1.40	28.00	4353.32	.076
	Hotelling's Trace	.033	1.40	28.00	4822.00	.076
	Roy's Largest Root	.018	3.15[c]	7.00	1210.00	.003

a. Design: Intercept and Age, b. Exact statistic, c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Table: 2 Tests of Between-Subjects Effects (F- Values) for number of siblings with Emotional Intelligence, Stress, Resilience, School Problem, Family Environment, Social Problem and Personal Problem

Since the results of the MANOVA are significant, the 'Tests of Between Subjects Effects' (univariate results) are examined to determine whether the independent variables are significant for each of the psychological and sociological factors.

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
No of siblings	Emotional Intelligence	1.381	4	.345	2.324	.055
	Stress	6.610	4	1.652	3.736	.005
	Resilience	.543	4	.136	.391	.815
	School Problem	.254	4	.063	.445	.776
	Family Environment	1.717	4	.429	2.544	.038
	Social Problem	.792	4	.198	.848	.495
	Personal Problem	.708	4	.177	1.218	.301

**The significance level is 0.05.*

Table-2 above shows the results of the tests of between subject effects. On examination of the table-2, it is found that there is significant difference for Emotional Intelligence ($F = 2.324$, $p = 0.055$), Stress (F = 3.736, p = .005), Family Environmental System (F = 2.544, p = .038). Resilience (F = .391, p = .815), School Problem ($F = .255$, $p = 0.776$), Social Problem ($F = .848$, $p = 0.495$) and Personal Problem ($F = 1.218$, $p = 0.301$) are not significant.

Further, on examination of the univariate descriptive result shows that, it has been found that girls who have on sibling reported higher level of emotional intelligence followed by those who had two, three and more than 3. Similarly, girls with more than 3 reported higher level of stress followed by 3, 2 and 1. Girls who have 1 sibling reported higher family environmental system followed by those who have 2, 3, no sibling and more than 3 siblings.

Hypothesis 2 (H2): There is no significant difference on the psychological and sociological problems across order of birth of the adolescents.

As mentioned above, this hypothesis is studied using MANOVA. The variables that entered the MANOVA model are order of birth, emotional intelligence, stress, resilience, school problem, personal problem, social problem and family environmental system.

There are four different test statistics namely, Pillai's trace, Wilk's Lambda, Hotelling-Lawley's trace and Roy's Greatest Root, each with its own associated *F* statistic. In this case, Pillai's Trace is the most robust of the four tests and hence it is used. A significance feature of this MANOVA design is that, all the four test statistic give almost identical F values except Roy's Largest Root.

The table-3 below shows the results. To determine the significance of the omnibus test, taking the composite of all the psychological and sociological factors, the researcher examined the *F* - static, and the significance value *p*. On examination of the table-3, it is found that *F* – static is significant at $p = 0.1$. This means hypothesis H4 is rejected and hence, there is a significant difference between order of birth across the psychological and sociological factors. Pillai's Trace = 0.025, $F(21, 3630) = 1.430$, $p = 0.092$ (< 0.1).

Table: 3 Multivariate Tests for order of birth with Emotional Intelligence, Stress, Resilience, School Problem, Family Environment, Social Problem and Personal Problem

Effect		Value	F	Hypothesis df	Error df	Sig.
Order of Birth	Pillai's Trace	.025	1.430	21.000	3630.000	.092
	Wilks' Lambda	.976	1.433	21.000	3469.274	.091
	Hotelling's Trace	.025	1.436	21.000	3620.000	.090
	Roy's Largest Root	.019	3.237[c]	7.000	1210.000	.002

a. Design: Intercept + Order of Birth, b. Exact statistic, c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Since the results of the MANOVA are significant, the 'Tests of Between Subjects Effects' (univariate results) are examined to determine whether the independent variables are significant for each of the psychological and sociological factors.

Table: 4 Tests of Between-Subjects Effects (F- Values) for order of birth with Emotional Intelligence, Stress, Resilience, School Problem, Family Environment, Social Problem and Personal Problem

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Order of Birth	Emotional Intelligence	.289	3	.096	.645	.586
	Stress	6.046	3	2.015	4.556	.004
	Resilience	1.403	3	.468	1.351	.256
	School Problem	.071	3	.024	.165	.920
	Family Environment	.411	3	.137	.807	.490
	Social Problem	.132	3	.044	.188	.904
	Personal Problem	.472	3	.157	1.084	.355

a. R Squared = .002 (Adjusted R Squared = -.001), b. R Squared = .011 (Adjusted R Squared = .009)
c. R Squared = .003 (Adjusted R Squared = .001), d. R Squared = .000 (Adjusted R Squared = -.002)
e. R Squared = .002 (Adjusted R Squared = .000), f. R Squared = .000 (Adjusted R Squared = -.002)
g. R Squared = .003 (Adjusted R Squared = .000)

Table- 4 above shows the results of the tests of between subject effects. On examination of the table- 4, it is found that there is significant difference for Stress (F = 4,556, p =0.004). Emotional Intelligence (F = .645, p = .586), Resilience (F = 1.351, p = .256), Social Problem (F = .188, p = 0.904), Family Environmental System (F = .807, p = 0.490), School Problem (F = .165, p = 0.920); and Personal Problem (F = 1.084, p = 0.355) are not significant.

Further, on examination of the univariate descriptive result shows that, it has been found that girls in the more than third birth order reported higher level of stress followed by those in the third, second and first.

CONCLUSION

Emotional intelligence, stress, and Family environment. If the girls have siblings, there is a learning from them, which enhances their Emotional intelligence. The loneliness, isolation, single child syndrome are minimized, when they have siblings. When they have siblings, sharing and caring is high and they try to share the best practices. Siblings support normally and financially during the worst times. There is a nexus among the siblings. In the present scenario two children are accepted by the family and births of the 3rd child, as a daughter acceptance level are very low. The younger children are being dominated by the elder ones. If the family is afford to get new dresses for all the family members, obviously, the younger one is victimized by giving the old clothes of the elders. The younger one will not have any say in the major family decisions. Taking for granted, rejecting the ideas of younger one is quite common in family environment.

Acknowledgement

This investigation was supported by Indian Council for Social Science Research (ICSSR), Government of India the Research Grant in the title of ‘‘Understanding the psycho-social problems among vulnerable adolescent girls and the effect of intervention through life skills training".

Conflict of Interests: The author declared no conflict of interests.

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How to cite this article: Rathnasabapathy M, Wesley J R, Maharishi R & Athilakshmi R (2018). Understanding Sibling Influences: The Effects of Number of Siblings and Order of Birth on Psycho-Social Behaviour among Adolescents Girls. *International Journal of Indian Psychology*, Vol. 6, (2), DIP: 18.01.026/20180602, DOI: 10.25215/0602.026