To Study The Effect of Birth Orders On Achievement Motivation Among Adolescent

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ABSTRACT

The present study was aimed to determine the effect the birth orders on achievement motivation among adolescents. The sample for the present study consisted of students selected from the nearest Inter College “Swami Satyamitranand Giri Inter College” Haripur Kalan, Dehradun, Uttarakhand. This is selected from three groups i.e. 30 from first birth order, 30 from second birth order and 30 from third birth order. For measurement of achievement motivation researcher used Rao achievement motivation test developed by G. Gopal Rao (1974). Analysis of data was done by using mean, SD, and ‘t’ test. The study revealed that: There is no significant difference between first born children and second born children on achievement motivation. There is no significant difference between first born children and third born children on achievement motivation. There is no significant difference on between second born children and third born children achievement motivation. The present study aims to examine the relationship between the birth orders on achievement motivation among adolescents. This research attempt to determine that is there any effect of birth orders on achievement motivation. It is recognized by the result that the level of achievement motivation both variables have been effected by the birth order.

Keywords: Birth Orders, Achievement Motivation and Adolescent.

1. INTRODUCTION

Birth order has long been an important factor in certain social customs and life experiences. These include choice of professions, opportunities for reproduction, emigration decisions, inheritance practices, and rules of royal succession. Ordinal position has also played a role in some social and political transformations. Although a substantial literature has documented a wide variety of birth order effects in health, intellectual performance, and behavior, the magnitude of these effects, and the nature of the domains in which they express themselves, remain sources of scholarly contention. Within the family, the role of birth order appears to be considerable in the expression of personality, social attitudes, and family sentiments. By contrast, in non-familial contexts, these effects are more muted. Moreover, the expression of birth order effects is often dependent, outside the family milieu, on whether or not certain attitudes and sentiments about the family are tapped in ways that make them salient.

Sibling competition is a common occurrence in the animal world and occasionally ends in siblicide. Birth order often affects the outcome of such struggles because it is a proxy for differences in age, size, power, and access to scarce resources. Among humans, ordinal position is associated with disparities in parental investment, which can lead to differences in behavior, health, and mortality. In addition, siblings in our own species typically occupy disparate niches within the family system and, in mutual competition, generally use different tactics based on age, size, and sex. These alternative strategies and life experiences have effects on personality and also foster differences in attitudes, motivations, and sentiments about the family. Where a child places in the birth order can have an effect on how he sees himself. Research on birth order, sometimes referred to as ordinal position, shows that first born children are more likely to go to college than children in any other position in the family. These
apply to "typical families" and probably do not apply to "dysfunction families" and may vary across various cultures. Parents should attempt to help each child to see themselves as unique individuals and avoid comparisons with siblings or others. The middle child often seems to have the most negative impressions of his lot in life. One approach to help middle children reframe things is to point out that in a sense they have the best of both worlds. They are the youngest to the older sibling and the oldest to the younger sibling. Therefore they are both a big brother/sister and a little brother/sister. Younger children always want to be able to do the things older siblings are allowed to do. And older siblings may feel that the younger siblings get away with things they were not able to when they were the same age.

The study of birth order and its correlates have been one of the early interests in Psychology. Birth order can affect many aspects of an individual’s life. It has been shown to affect things like personality (Howarth, 1982), self-esteem (Romeo, 1994) and cognitive achievement (Travis, 1995).

Many studies have been done in an attempt to determine what exactly makes people who they are. Birth order has been relevant in many research studies. Each rank, the oldest, middle, youngest, and only, generally have similar characteristics that are common in different people of the same birth order. It is logical to conclude that these similar characteristics will affect other aspects of life, namely “achievement motivation”. If the birth order factor has a major influence on an individual’s personality, and different people of the same birth order have similar personality traits, then this research attempt to determine that birth order can effect on achievement motivation in school going children.

According to Hjelle and Ziegler (1992) the theoretical discussion of the meaning and effects of birth order have been traced back 1928 by Alfred Adler who first recognized birth order as a significant factor in personality development. Adler believed that “even though children have the same parents and grow up in nearly the same family setting, they do not have identical social environments”. Adler also reported the characteristics that the various birth orders seem to share. The oldest child tends to be conservative, power oriented and predisposed towards leadership. The only child according to Adler tends to be dependent and self centered. Adler is also quoted as saying, “the only child has difficulties with every independent activity and sooner or later they become useless in life”. Further more, the middle child is usually achievement oriented, but may set unrealistic goals that will end in failure; finally the youngest tends to be highly motivated to outdo older siblings in various accomplishments.

Toni Falbo, (1981) observed a significant relationship between birth order and competitiveness. First and middle children scored significantly higher than last born on competitiveness. Linda Hargrove and Toni Falbo, (1986) explored the relationship between birth order and achievement motivation and found a significant correlation between birth order and one specific facet of achievement motivation i.e., competitiveness. It may be that the presence of competitiveness mediates the relationship between birth order and achievement.
2. REVIEW OF LITERATURE

During the past decades various studies, researches works have been done on the achievement motivation. Following is an epitome of these research works:

Kalia, Devi and Sheoran (2001) examined the significant differences in depression of school going children in relation to their birth order. For this purpose a sample of 80 students studying in eight class was selected randomly for urban and rural schools of Rohtak district. The sample was divided into three groups, namely first born, middle born and last-born children. They were administrated “Children’s Depression Scale” (CDS) by Miriam Tisher and Moshe Lang (Hindi translation). Analysis of results suggest that first born children are slightly higher on sickness and death and full ‘D’ scale dimensions of depression scale in comparison to middle born children. Last born children were found significantly higher on social problems in comparison to first born children. On full ‘D’ scale the first born children were found significantly higher than the last born children. No significant difference was observed among the second born and the last born children on any dimensions of depression.

Blanchard, Zucker, Cavacas, Allin, Bradley and Schachter (2002) examined the homosexual males with older brothers weigh less at birth than do heterosexual males with older brothers. The subjects comprised 250 feminine boys referred to a child psychiatry service because of extreme cross-gender wishes or behavior and assumed, on the basis of previous research, to be prehomosexual, plus 739 control boys and 261 control girls referred to the same service for reasons unrelated to sexual orientation or gender identity disorder and assumed, from base-rate probabilities, to be preheterosexual. The feminine boys with two or more older brothers weighed 385 g less at birth than did the control boys with two or more older brothers (P = 0.005). In contrast, the feminine and control boys with fewer than two older brothers did not differ in birth weight. This finding suggests that the mechanism by which older brothers increase the odds of homosexuality in later-born males operates prior to the individual's birth. We hypothesize that this mechanism may be immunologic, that antimal antibodies produced by human mothers in response to immunization by male fetuses could decrease the birth weight of subsequent male fetuses as well as increase their odds of homosexuality.

Saroglou and Fiasse (2003) studied the effect of birth order on personality are modest but not inexistent. However, studies do not often distinguish between two kinds of laterborns: middleborns and lastborns. In addition, some evidence suggests effects of birth order on religion. In the present study, 122 young adults from three-sibling families completed the NEO-PI-R and gave information on religion and school performance. Peer(mother)-evaluation of personality was also assessed. Middleborns seemed to represent the “rebellious” (laterborn) sibling in Sulloway's (1996) theory: in comparison to their siblings, they were less conscientious, less religious, and lower in school performance, as well as more impulsive and open to fantasy, whereas lastborns were the most agreeable and warm. In most cases, effects were similar in self- and mother-evaluation. Finally, mother
ratings validated self-reported personality correlates of religion (Conscientiousness, Agreeableness, low impulsiveness and low excitement seeking) and spirituality (Openness).

Bogaert (2004) examined the prevalence of male homosexuality probably varies over time and across societies. One reason for this variation may be the joint effect of two factors: (1) variations in fertility rate or family size; and (2) the fraternal birth order effect, the finding that the odds of male homosexuality increases with each additional older brother. Because of these effects, the rate of male homosexuality may be relatively high (at least in terms of sexual attraction if not behavior) in societies that have a high fertility rate, but this rate has probably declined somewhat in some, particularly western, societies. Thus, even if accurately measured in one country at one time, the rate of male homosexuality is subject to change and is not generalizable over time or across societies.

Blanchard, Cantor, Bogaert, Breedlove and Ellis (2006) investigated evidence for an interaction between two of the best established etiologic factors, or markers of etiologic factors, in the literature on male homosexuality: fraternal birth order and hand preference. By combining five samples, the authors produced study groups of 1774 right-handed heterosexuals, 287 non-right-handed heterosexuals, 928 right-handed homosexuals, and 157 non-right-handed homosexuals. The results showed a significant (P = 0.004) handedness by older brothers interaction, such that (a) the typical positive correlation between homosexuality and greater numbers of older brothers holds only for right-handed males, (b) among men with no older brothers, homosexuals are more likely to be non-right-handed than heterosexuals; among men with one or more older brothers, homosexuals are less likely to be non-right-handed than heterosexuals, and (c) the odds of homosexuality are higher for men who have a non-right hand preference or who have older brothers, relative to men with neither of these features, but the odds for men with both features are similar to the odds for men with neither. These findings have at least two possible explanations: (a) the etiologic factors associated with non-right-handedness and older brothers–hypothized to be hyperandrogenization and anti-male antibodies, respectively–counteract each other, yielding the functional equivalent of typical masculinization, and (b) the number of non-right-handed homosexuals with older brothers is smaller than expected because the combination of the older brothers factor with the non-right-handedness factor is toxic enough to lower the probability that the affected fetus will survive.

Reichenberg, Smith, Schmeidler and Silverman (2007) examined the autism was predominantly genetically determined. Evidence supports familiality of the main sets of behavioral characteristics that define the syndrome of autism; however, possible non-genetic effects have also been suggested. The present study compared levels of autism symptom domains, as measured by the Autism Diagnostic Interview, and useful phrase speech scores between 106 pairs of first- and second-born siblings from multiply affected families. In addition, the intercorrelations between the measures were compared between siblings. The overall mean repetitive behavior total score was significantly higher (worse) in first-born than in second-born siblings. In contrast, first-born siblings had significantly lower (better) useful phrase speech than their younger siblings. Autism social and non-verbal communication scores were significantly correlated in first- and in second-born siblings. However, there was a
significant difference in the coefficients between first- and second-born siblings. Performance on the non-verbal communication domain was also significantly and positively correlated with useful phrase speech score in both first- and second-born siblings. It is unclear at this time whether these results are of biologic origin. Nevertheless, the findings suggest that genetic studies in autism using specific levels of familial autism traits as phenotypes should take into account their intercorrelations and birth order effects embedded in the instrument.

Gaughran, Blizard, Mohan, Zammit and Owen (2007) proposed risk factor for schizophrenia is materno-foetal incompatibility. We tested the hypothesis that, in multiply affected families, later born children would exhibit a more severe form of schizophrenia than their older siblings. The effect of birth order on (1) severity of the worst ever episode of illness; (2) deterioration from premorbid level of functioning; (3) age of onset; (4) response to medication; and (5) illness course, was assessed in 150 sibling pairs with schizophrenia and schizoaffective disorder. We found that later birth order reduced the likelihood of regaining the premorbid level of functioning after an acute episode and was also associated with an earlier age of presentation. This study lends some support to the hypothesis that later birth order results in a more severe form of the disorder, although there are other possible explanations for our findings. Further work is needed to explore the possibility of maternal–foetal genotype incompatibility as a risk factor for schizophrenia.

Healey and Ellis (2007) investigated differences between firstborn and secondborn siblings on major dimensions of personality, in the context of the proposal of Sulloway [Sulloway, F. J. (1996). Born to rebel: Birth order, family dynamics and creative lies. New York: Pantheon] that personality is influenced by the specialized niches siblings adopt in the quest for access to parental resources. Using a within-family methodology, we tested two predictions from Sulloway's model: that firstborns are more achieving and conscientious than secondborns and that secondborns are more rebellious and open to new experiences than firstborns. To test an alternative prenatal hypomasculinization theory proposed by Beer and Horn [Beer, J. M., and Horn, J. M. (2000). The influence of rearing order on personality development within two adoption cohorts. Journal of Personality, 68, 769–819], we also examined the size of birth-order effects in sister–sister versus brother–brother pairs. The hypothesized effects of birth order on personality were found in both Study 1 (n=161 sibling pairs) and Study 2 (n=174 sibling pairs) and provided support for Sulloway's family-niche model. No support was found for Beer and Horn's hypomasculinization model.

Pollet, and Nettle (2007) studied the evolutionary theory of kin selection predicts that individuals may invest time and resources in their siblings, but that older siblings will invest in younger ones more than vice versa. This leads us to predict that firstborns are more likely to keep in touch with their sibling(s) than middleborns or laterborns. Using a large-scale dataset from the Netherlands (n1 = 1558), firstborns were indeed found to have significantly more frequent face-to-face contact, on a weekly basis, with a sibling than middle- or lastborns. This effect was found using multinomial logistic regression in which we controlled for other factors (educational attainment, difference between siblings in educational attainment, age and gender). The finding that firstborns are significantly more
likely to keep in touch with their sibling on a weekly basis than laterborns remained unaltered after controlling for geographical distance between siblings \( n_2 = 1394 \). Middleborns did not differ significantly from lastborns in contact with their sibling(s). Findings are discussed with reference to research on birth order and family relationships.

**Abdel-Khalek and Lynn (2008)** studied the relation between intelligence and family size and birth-order was examined in a sample of 4643, 8–15 years old in Kuwait. There was a correlation of \(-0.05\) between intelligence tested with the Standard Progressive Matrices and family size, much smaller than those typically found in a number of studies in the United States and Europe and effectively negligible. There was a slight tendency for first and second born children to have higher IQs than later born but again the effect was negligible. This association was present for children aged 8–10 and for those aged 12–16 years. It is considered that the results are incompatible with the theories of Zajonc and Blake that family size and birth-order have significant effects on IQ, and support the conclusion of Rodgers that family size and birth-order have no significant effects on IQ.

**Rees, Lopez, Averett and Argys (2008)** investigated birth order and risky adolescent behavior. Economic Inquiry, 44(2), 215–233 demonstrated that a strong link exists between birth order and adolescent risky behavior. Using data on 10th graders from the National Education Longitudinal Study of 1988, we extend the work of Argys et al. by examining the relationship between birth order and participation in school sports and other extracurricular activities. Our results suggest that having an older sibling is associated with an increased probability that males played baseball and football, were members of the school swim team, and participated in cheerleading. Female 10th graders with older siblings were less likely to engage in a variety of extracurricular activities including school band, community service, and yearbook. These results provide additional evidence that birth order is related to adolescent behavior.

### 3. OBJECTIVE AND HYPOOTESSES

The present study aims to establish relationship between the effects of birth orders on achievement motivation having following hypothesis.

1. There is no significant difference between first born children and second born children on achievement motivation.
2. There is no significant difference between first born children and third born children on achievement motivation.
3. There is no significant difference on between second born children and third born children achievement motivation.

### 4. METHODOLOGY

**Sample:** For this study, sample size of 90 students is selected from the nearest Inter College “Swami Satyamitanand Giri Inter College” Haripur Kalan, Dehradun, Uttarakhand. This is selected from three groups
i.e. 30 from first birth order adolescents, 30 from second birth order adolescents and 30 from third birth order adolescents. The students are selected on the basis of purposive sampling technique. All the students belong to equal SES.

**Tool/scale:** For measurement of achievement motivation researcher used Rao achievement motivation test developed by G. Gopal Rao (1974). In this test high score indicate higher achievement motivation level and low score indicate lower achievement motivation level.

**Hypothesis:** For measurement of birth order on achievement motivation researcher used following Null hypothesis.

**Hypotheses:**

- **Hypothesis 1:** There is no significant difference between first born and second born adolescents on achievement motivation.

- **Hypothesis 2:** There is no significant difference between first born and third born adolescents on achievement motivation.

- **Hypothesis 3:** There is no significant difference between second born children and third born adolescents on achievement motivation.

5. **RESULTS**

In this research work mainly three hypotheses have been formulated. Each hypothesis will be discussed below.

**Table:** - 1: Showing the comparison between first born and second born adolescents on achievement motivation.

<table>
<thead>
<tr>
<th>Birth Order</th>
<th>N</th>
<th>Achievement Motivation Scores</th>
<th>SE_D</th>
<th>C_R</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Born</td>
<td>30</td>
<td>50.80</td>
<td>4.58</td>
<td>0.99</td>
<td>1.01</td>
</tr>
<tr>
<td>Second Born</td>
<td>30</td>
<td>51.80</td>
<td>2.98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graphical Representation of Table:** - 1
On the basis of the result 1 graph and table 1, the mean of the first born and second born children are 50.8 and 51.8 respectively. The SD of the first born and second born children are 4.58 and 2.98 respectively. The t-test was used to assess the significance of the hypothesis. The obtained t-value is 1.01, since the obtained t-value is less than the table value at 0.05 level of confidence for df = 58. So, there is no significance difference on achievement motivation between first born and second born adolescents. Since the hypothesis 1 is accepted.

Table 2: Showing the comparison between first born and second born adolescents on achievement motivation.

<table>
<thead>
<tr>
<th>Birth Order</th>
<th>N</th>
<th>Achievement Motivation Scores</th>
<th>SE_D</th>
<th>C_R</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Born</td>
<td>30</td>
<td>50.80</td>
<td>1.07</td>
<td>0.49</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Third Born</td>
<td>30</td>
<td>51.33</td>
<td>0.49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

df = 58

Graphical Representation of Table: - 2

On the basis of the result table 2 and graph, the mean of the first born and third born children are 50.8 and 51.33 respectively. The SD of the first born and third born children are 4.58 and 3.63 respectively. The t-test was used to assess the significance of the hypothesis. The obtained t-value is 0.49, since the obtained t-value is less than the table value at 0.05 level of confidence for df = 58. So, there is no significance difference on achievement motivation between first born and third born children. Since the hypothesis 2 is accepted.

Table 3: Showing the comparison between second born children and third born adolescent’s achievement motivation.
<table>
<thead>
<tr>
<th>Birth Order</th>
<th>N</th>
<th>Achievement Motivation Scores</th>
<th>SE</th>
<th>C R</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Born</td>
<td>30</td>
<td>51.80</td>
<td>2.98</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Third Born</td>
<td>30</td>
<td>51.33</td>
<td>3.63</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

df = 58

**Graphical Representation of Table: - 3**

On the basis of the result table 3 and graph, the mean of the second born and third born children are 51.8 and 51.33 respectively. The SD of the second born and third born children are 2.98 and 3.63 respectively. The t-test was used to assess the significance of the hypothesis. The obtained t-value is 0.55, since the obtained t-value is less than the table value at 0.05 level of confidence for df = 58. So, there is no significance difference on achievement motivation between second born and third born children. Since the hypothesis 3 is accepted.

6. INTERPRETATION AND DISCUSSION

In the present research work “A study the effect of birth order on achievement motivation among adolescents” the researcher attempt to determine that birth order can effect on achievement motivation in school going children. In this work the researcher has made 3 hypotheses and results show that our 3 hypotheses are accepted. It means that variables of above hypotheses did not score significant difference on achievement motivation.

Achievement motivation is such a motive which induct to the person in such a way that he can get more and more success. As “Munn, Fernald and Fernald”, (1972) said, “Achievement motive seeks the willingness to get to specific level of superiority.” Not only birth order but also many other factors affect to achievement motivation. For example, many psychologists showed in their research that achievement motivation has warm relationship from the ‘independence training’ given by the parents to their child. The meaning of this training is that parents compel their child independently to do different types of the work. Understanding nonsense, some parents do not pay attention on their child’s deed. Some parents gives the independence to their child to do his work by own and also give different type of incentive after the completion of work. So it can be said that the first type of child could not get
independence training as the second type got, that’s why the second type child has same achievement motivation than first type. So this is main factor which affect the achievement motivation of any individual. A number of psychologists considers that an individual’s ‘socio-economic status’ also affects to his need of achievement. Who have low socio-economic status, they have high achievement motivation and who have high socio-economic status, they have low achievement motivation. Main motive may be sampling error because the sample size was 90. It was divided into three parts having 30 units. After that every cluster was divided into two groups of 15 units to control the extraneous variable – sex. Like this we can say that results give us an idea about ‘no relationship’ between variables owing to miniature sample size. Koren M. Dailey (2006) completed a study (Birth order and its effect on motivation and academic achievement) and located no significant differences between birth orders. In order to interpretation Dailey suggested that this study would need many more participants to show a significant difference, as birth order effects are normally very small.

Therefore, finally we can say that birth order is a controversial topic, and has been debated for decades. Only three hypotheses are rejected. It resources that variables of these hypotheses scored significantly difference on achievement motivation. At this instant, we would interpretation of results separately.

7. CONCLUSION
In present research work “a study of achievement motivation among birth orders” researcher want to examine the relationship between birth order and achievement motivation. This research attempt to determine that birth order can effect on achievement motivation in school going children. It is recognized by the result of this field study that birth order, both variables have effected to achievement motivation. The fact is this, the achievement motivation has been found in children whether they have any type of birth order. Hence, we can declare that the achievement motivation of happens to the children according to this study. But, we can not declare about to birth orders clearly yet. There are many such large scaled researches which are against to each other. The results indicated that there was no significant relationship between achievement motivation and birth order.

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