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Relationship between birth order and personality trait extroversion

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ABSTRACT

This study examined how birth order affects personality traits, specifically extraversion, in firstborn and lastborn individuals. A comparative research design was used, and data was gathered from 160 participants - 80 firstborns and 80 lastborns. Both groups consisted of 40 male and 40 female participants between the ages of 16 and 22 who were selected through purposive sampling. Eysenck's Personality Inventory was used as the assessment tool, and the data were analyzed using an independent sample t-test. The results showed a significant difference in extraversion between firstborn and lastborn individuals but no difference based on gender.
Keywords: Birth Order, Personality Traits, Extraversion, Gender Differences

Chapter I

1.1 Introduction and Literature Review

The area of the research focuses on the effect of birth order on personality traits (extraversion). The variables used were 'birth order' (independent variable) and 'extraversion' (dependent variable) as the first and last born were compared on extraversion. Moreover, gender was taken as an independent variable about extraversion as it was hypothesized that gender-based difference is significant in personality traits (extraversion) among males and females.

“Birth order refers to the numerical place of a person in the order of births in his or her family” (Angst & Ernst, 1983). The definition of dependent variable extraversion can be quoted according to Jung (1939), "Our energy moves toward the outer world of people, places and things; the world outside of us." Whereas gender can be defined as "a person's sense of self as a female or a male" (Stein et al., 1997). Every individual in the world is categorized based on his or her birth order. Several psychologists and researchers put forth their theoretical frameworks regarding the effect of birth order on different dimensions of personality. Although numerous factors play an important role in one's personality development, such as family structure, socio-economic status, biopsychosocial detriments, etc., research has shown individual personality differences depending on birth order.

A study by Klein 2007 investigated the relationship between personality traits and the birth order of introverts and extroverts. The sample was comprised of a total of 147 participants (70 males and 70 females), all of whom belonged to families having three children and were University undergraduates. The assessment tool used was a sub-scale from the Minnesota

Multiphasic Personality Inventory, the Social Introversion Scale (Scale 0) of the MMPI, which was employed to collect the required information. Data was analyzed statistically using a two-way analysis of variance, and it was concluded that firstborns were less extroverted compared to middle-borns and lastborns (Klein, 2007).

-Ernst and Argst (1983) conducted a study to explore the influence of birth order on one's personality. The sample was comprised of 7582 participants who were in their early adulthood. A personality test was applied, which measured 12 aspects of personality, including introversion, extraversion, and openness. According to the results of this study, there was no significant difference in the first and second borns who belonged to families with two children in contrast to families with three or more children who showed significant difference. Moreover, the parents were interviewed regarding their children's personalities and communicated that the firstborn mostly shows serious and responsible behaviors compared to the laterborn, who have cheerful, outdoorsy, and independent personalities. These findings show that the firstborn personality is parent-specific.

1.2 The rationale of the study

Although environmental factors such as familial relationships, socio-economic status, and educational background play a substantial role in shaping an individual's personality, in the current era of research and experimentation, central themes such as introversion and extraversion are considered the core of human personality. In studying personality traits, birth order is a key element that has always been regarded as a personality-shaping factor of human beings. Most of the research in this field has studied the parental influences towards first and last born and also the impact of these influences on one's personality development. The determination behind the study was to reveal how birth order affects personality traits (extraversion) and investigate the gender-based comparison of extraversion in our society. This research highlights the effects of extra importance given to first and last borns on their personality development in Pakistani society.

1.3 Aims of the Study

- To investigate the effect of first and last birth order on personality traits (extraversion).
- To explore gender differences in personality traits (extraversion) among males and females.

1.4 Hypotheses

- H1: Personality trait (extraversion) significantly differs in first and last borns.
- H1: Personality trait (extraversion) significantly differs among genders.

Chapter II
Method

2.1 Research Design

The study was conducted using a causal-comparative research design.

2.2 Sample and Sampling Technique

This study comprised 160 participants (N=160), of which 80 were first born, and 80 were last born. Among (n=40 80) firstborn participants, 40 were males and 40 were females. Also, among the lastborn group (n=80), participants were males, and 40 were females. The age range of participants was from 16 – 22 years, and the sample was drawn from co-educational institutes in Lahore, Pakistan. The purposive Sampling Technique' was used to collect the sample, as the data was collected from students having first and last birth orders (Oliver, 2006).

2.3 Measures

2.3.1 Eysenck's Personality Inventory (EPI)

This inventory was developed by H. J. Eysenck in 1963 for measuring personality traits. This psychometric test is a 57-item scale designed to assess personality dimensions of extraversion (E), which scored out of 24, and neuroticism, which also scored out of 24. EPI also consisted of a 'Lie Scale' (L), scored out of 9, to determine the respondents' attempt to be socially desirable. Each item on this scale has a 'yes' or 'no' response available. EPI overall has good psychometric properties with a high-reliability value of 0.95 and a validity of 0.87 (Eysenck, 1963).

2.4 Procedure

The sample was collected from different institutions in Lahore, Pakistan, viz. Kinnaird College for Women, Lahore Grammar School, Beacon House School, Government College University, and Aitchison College. The participants were briefed about the research study, and their permission and demographic data were collected before handing them the questionnaire. It took around 15-20 minutes for each participant to answer all the questions. The respondents were given special instructions regarding the criteria of the questionnaire. Each participant was assured of the privacy and confidentiality of their responses. Since the study was related to extraversion level, only the 'E scores' from the data were evaluated.

Chapter III
Results

The present study investigates how birth order affects personality traits, specifically extraversion, in firstborn and lastborn individuals. The findings are elaborated on in this chapter. Personality trait (extraversion) is significantly different among first and last born. An independent sample t-test was conducted to test the hypothesis mentioned above. The hypothesis was accepted because the results showed a significant difference in personality traits (extraversion) among firstborns and lastborns.

Table 1: Shows Mean, Slandered Deviation, and Independent Sample t-test values for personality trait (extraversion) among first and last born.

Status	N	M	SD	Df	t	p
First Born	80	10.263	2.768	158	15.07	0.000**
Last Born	80	16.838	2.748			

**p<0.05

Note: N= Total number of subjects, M = Mean, SD Standard Deviation, df = degree of freedom, t = Independent sample t-test calculated value, p = significance level.

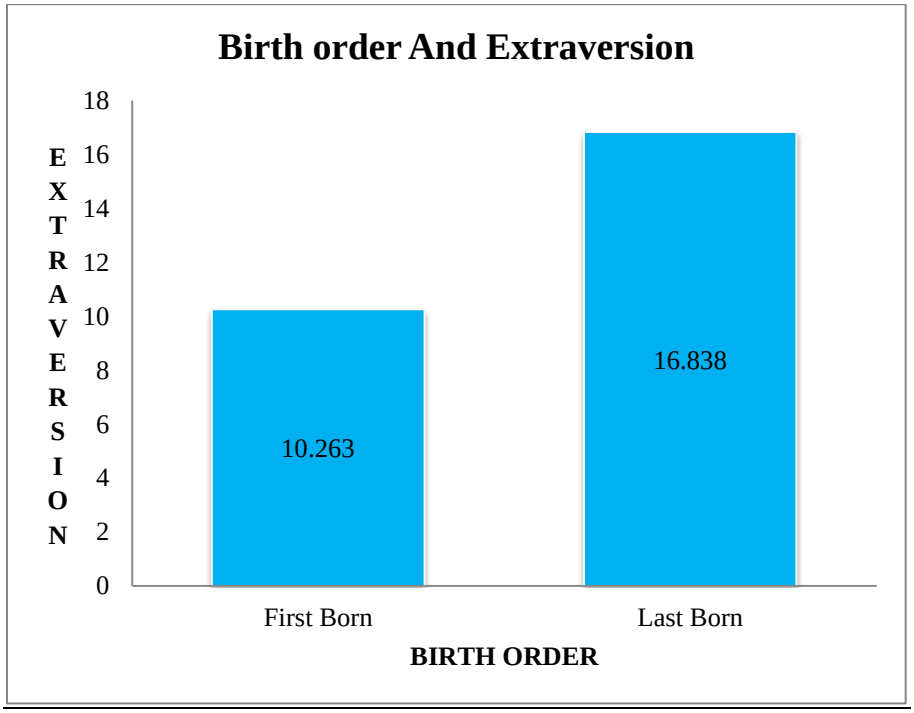

Figure 1: Mean values for the personality trait (extraversion) among first and last born.
Note: Figure 1 shows that the mean value for extraversion in the firstborn is (M = 10.263), whereas the mean value for extraversion in the last born is (M = 16.838).
Table 1 represents the Mean, Standard Deviation, and independent sample t-test value for personality traits (extraversion) among first and last born. According to the results shown, the existence of personality traits (extraversion) among firstborns and lastborns are significantly different t (158) = 15.07 ($p < 0.05$). Figure 1 shows the mean score values of personality traits (extraversion) among first and lastborns.

There is a significant gender-based difference in personality traits (extraversion) among males and females. To test the hypothesis as mentioned earlier, an independent sample t-test analysis was carried out, and the hypothesis was not accepted because the results showed no significant gender-based difference in the existence of personality traits (extraversion) among males and females.

Table 2: Shows Mean, Slandered Deviation, and Independent Sample t-test values for personality trait (extraversion) among males and females.

Status	N	M	SD	Df	t	p
Males	80	13.462	4.031	158	0.257	0.798
Females	80	13.637	4.565			

Note: N= Total number of subjects, M = Mean, SD Standard Deviation, df = degree of freedom, t = Independent sample t-test calculated value, p = significance level.

Figure 2

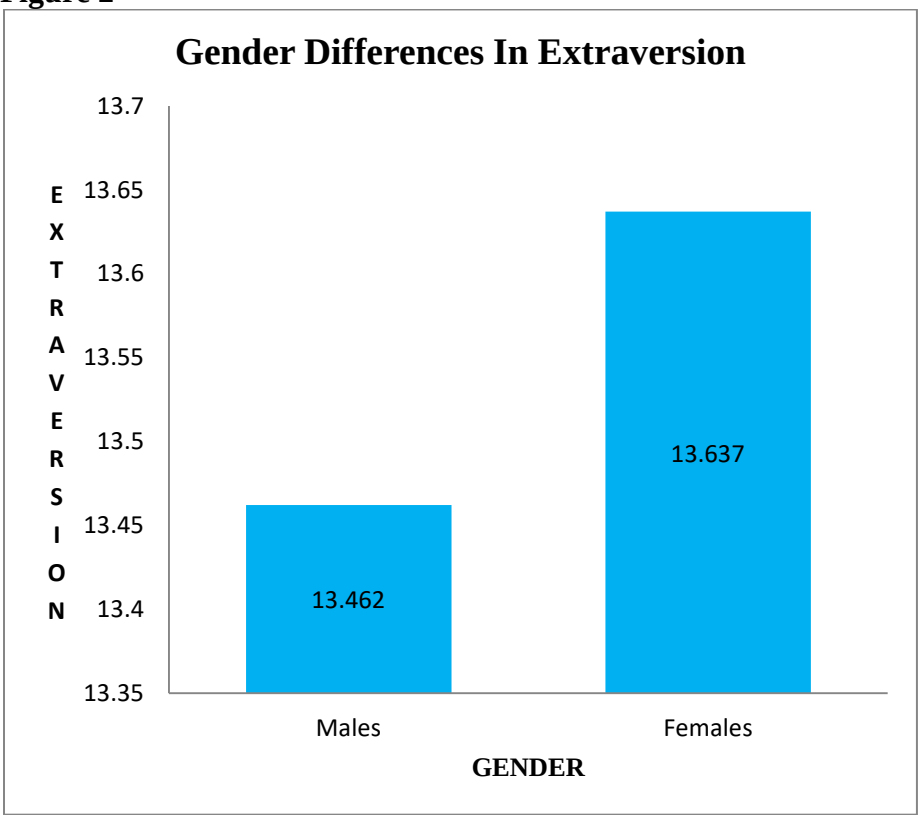

Figure 2: Mean values for the personality trait (extraversion) among males and females.
Note: Figure 2 shows that the mean value for extraversion in males is (M = 13.462), whereas the mean value for extraversion in females is (M = 13.637).

Table 2 represents the Mean, Standard Deviation, and independent sample t-test value for personality trait (extraversion) among males and females. According to the results shown, there is no significant gender difference in the existence of personality trait (extraversion), t (158) = 0.257, p > 0.05. Figure 2 shows the mean score values of personality traits (extraversion) among both genders.

Chapter IV
Discussion

The study outcomes illustrate a significant difference in personality traits (extraversion) among first and lastborns. To test the hypothesis, data was analyzed through a t-test. An Independent Sample was employed to compare the personality trait (extraversion) difference among first and lastborns. The hypothesis was supported as the results showed that the personality trait (extraversion) has a significant difference among first and last born, t (158) = 15.07, and p (level of significance) is less than 0.05. The mean value for firstborn participants (M = 10.262) indicated that the personality trait (extraversion) is more prevalent among the born since their mean value was higher (M = 16.838).

A longitudinal study was conducted by Hauser in 1997 on university students studying at undergraduate and graduate levels at the University of Wisconsin-Madison to compare siblings on personality traits (extraversion) based on their birth order. The questionnaire was the 'NEO Five-Factor Inventory,' the participants were instructed to fill a 2-item extraversion scale. The sample consisted of 47 firstborn participants (20 males and 27 females) and 49 lastborn participants (25 males and 24 females) belonging to an age range of 18-52 years. The results showed that the personality trait (extraversion) is significantly impacted by birth order (Hauser et al., 1997).

The study also indicates that gender-based personality trait (extraversion) differences are insignificant. To test the hypothesis, data was analyzed through the t-test Independent Sample method, which was employed to compare the mean values for personality traits (extraversion) among males and females. The hypothesis was not supported as the results showed that there is a gender-based difference in personality trait (extraversion), is not significant t (158) = 0.257, and p (level of significance) is greater than 0.05. The mean value for male participants (M = 13.462), whereas the mean value for female participants was (M = 13.637).

Another investigation highlighted the relationship between gender and personality traits (extraversion) by Herrera, Nicholas, & Zajonc, 2003. As the sample consisted of both males and females, and they were adolescents, firstborns were explored to be most responsible, intelligent, and introverted. In contrast, the last born were more extroverted and outgoing. In contrast to the earlier findings, their gender-based difference in personality traits (extraversion) was insignificant (Herrera et al., 2003).

In light of those mentioned above and similar research studies, birth order plays a substantial role in an individual’s personality development. Although the familial atmosphere is a significant factor in depicting one’s personality, the findings of our study showed that the difference in the personality trait (extraversion) among first and last born is significant. On the other hand, there is no gender-based difference in personality traits (extraversion), which is supported by many other similar studies.

Conclusion:

Birth order is influential in different dimensions of an individual's personality development. Taking the personality trait of extraversion as the subject matter of this study, we can conclude that firstborns are less extroverted than born. The comparison of extraversion and introversion has held much interest in personality studies and the causes or influences that can cause such behaviors to become dominant. Interestingly, the birth order has a significant effect on such traits, whereas there is no significant effect of gender on such personality traits.

Limitations:

Some useful conclusions were deduced from this research. However, some limitations are noteworthy. Firstly, the age range of participants was 16-22 years only; thus, it can't be generalized to all other age groups. Secondly, the sample comprises students from specific educational institutions, so the sample cannot represent people with different educational qualifications. Also, the participants were well educated to answer the questionnaire in its original English version.

Recommendations:

The age range selected for the participants can be broadened to have a better generalized representation of these results. With a broader age range, participants with various educational backgrounds and professional experience can be included in such research. Also, a translated version of the questionnaire can be prepared to include participants who need to be educated enough to answer it in its original English version, thus including various participants from different socio-economic classes.

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