

Impact of Birth Order and Locus of Control on Life Satisfaction

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ABSTRACT

Life Satisfaction is an overall assessment of feelings and attitudes about one's own life at a particular point of time which can range from negative to positive. Life Satisfaction is influenced by Birth order and Locus of control. The present research study aimed to study the impact of Birth order and Locus of control on Life satisfaction. Data was collected from 30 families who have three siblings (based on Adler's Birth order theory) which included 41 males and 49 females. Rotter's Locus of Control scale (1966) and Diener's Satisfaction with Life scale (1985) were employed on participants of this study. The findings from this study indicated that there was no significant interaction effect of Birth order and Locus of control on Life satisfaction among both males and females. There was no significant mean difference in Life satisfaction between various birth order categories. Further research recommendations, implications and limitations of this study have also been discussed in this paper.

Keywords: Life satisfaction, Birth order, Locus of control and Gender

Individuals in their early twenties to late thirties are considered young adults. Young adulthood is a distinct developmental stage that emerges as a person moves from adolescence to adulthood. The data from a previous study on subjective well-being of young adults revealed that, life satisfaction follows a slightly hill-shaped course to about age 40 and the life transitions plays an important role in this course. Research studies on the similar topic revealed that there was a mild increase in life satisfaction in early adulthood followed by a decline in later life (Mroczek and Spiro, 2005).

Subjective well-being is a broad topic that involves various subsets such as emotional responses, positive and negative affects, cognitive judgement of life satisfaction and domain satisfaction (work satisfaction, marital satisfaction etc). Thus, life satisfaction is a part of subjective well-being. Life Satisfaction is influenced by factors such as individual's Personality attributes (self-esteem, locus of control, empathy etc.,) socio demographic factors (age, gender, birth order, socio-economic status, ethnicity) and environmental factors (family and friends, academic or work stress, sex, achievement motivation, death anxiety etc.,) Interpersonal factors (temperament, social interest, optimism and hope). Results of a study implied that

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there was a significant positive relationship between life satisfaction, self-concept and locus of control (Tas & Iskender, 2017). A previous study revealed that there was a significant difference found between birth order and the other psychological variables examined which includes Life satisfaction (Clarie, 2014)

Birth order is the ordinal position and psychological position of an individual in a family (Shulman and Mosak, 1977). The concept of locus of control which has been derived from Rotter's social learning theory is accepted as an expansion of the personality and is currently being subject to research in various aspects especially in Psychology. Locus of control is viewed as a cognitive expectancy which defines the individual's view of causal factors related to an outcome. Shekar et al. (2014) conducted a study that determined that there was a significant statistical gender difference and birth order difference in locus of control.

Life Satisfaction involves people's experience of pleasure and their appreciation of life's rewards and it is greatly influenced by an individual's Personality and Demographic factors. Hence, it is necessary to investigate the impact that Birth order as a demographic factor and Locus of Control as a personality factor have on Life Satisfaction. The current study focuses on how Birth Order and different types of Locus of Control impact the level of Life Satisfaction among young adults belonging to three sibling families. It is observed that inadequate research is done on these variables and hence reliable literature on the same is barely available. It is essential that both Birth order and Locus of Control should be studied together in order to find their impact on Life Satisfaction and hence it demands for this study.

MATERIALS AND METHODS

Variables

Independent Variables – Birth order, Locus of Control, Gender

Dependent Variables – Life Satisfaction

Sample

In the present study, 90 participants were selected as a sample for this study (30 from each birth order category). Non-Probability Sampling method was used in this study. Purposive Sampling and Snowball Sampling techniques were used to select the sample for this study. A total of 135 participants took part in the study which includes siblings from 45 families. However, considering the inclusion and exclusion criteria of the study data from 15 families were restricted from the study's sample. No participants chose to drop out of the study after data collection and none have submitted an incomplete form.

Instruments

Two measures were used for this study.

- **Rotter's Locus of Control Scale (1996).** In this study the Rotter's Internal-External Locus of Control Scale was used. The scale is developed by Julian B. Rotter and is available freely on a reliable website for academic purposes. The scale consists of 29 items with 6 filler items that are spread widely across different life situations. This scale is a forced choice instrument which consists of pairs of statements. Only 23 of them are scored. The internal consistency reliability ranges between 0.65 and 0.79 and test-retest reliability ranges between 0.49 and 0.83. The Validity of the scale in correlation with Marlowe-Crowne Social Desirability Scale ranges between -0.41 - 0.12.

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- **Satisfaction with Life Scale (SWLS, 1985).** To measure Life Satisfaction the present study used Satisfaction with Life scale developed by Diener, Emmons, Laresen and Griffin (1985). The scale was downloaded from a website that is accessible to the public for academic purposes. The scale consists of 5 statements related to overall general life satisfaction that fits all ages from adolescents to adults. Each item is answered on a 7 point likert scale (Strongly Disagree to Strongly Agree). Higher the scores, higher is the life satisfaction of an individual. The reliability analysis of the SWLS showed an internal consistency of 0.74 (Cronbach's alpha). The SWLS showed adequate concurrent validity, since the correlation index with LSI was $r = .77$

Procedure

The research study was advanced to further process after procuring the measures to be employed on participants. A few arrangements were made for data collection. The Informed consent forms, Demographic sheets and questionnaires were organized. Participants who were selected using Purposive and Snowball Sampling were assured of maintaining confidentiality throughout the study and were to be used for research purposes. The questionnaire was shared using google forms to the selected participants. The participants were identified based on the inclusion and exclusion criteria of the study. Identified participants were briefed about the study and the ethical considerations (to keep data confidential, to analyze data without any judgements and to have the right to withdraw from the study) taken into account and individuals who agreed to participate in the study were requested to sign in the ‘informed consent form’. The participants were asked to respond to every item and were requested to answer as honestly and reliably as possible. As the process went online due to the current covid situation the data was collected using google forms. It took approximately three weeks to finish data collection.

IBM SPSS Statistics version 20 was used for the analysis of data and the statistical treatments of the scores. The data was analysed using Descriptive Statistics for Socio Demographic Variables. The data was tested for normality of distribution using Skewness and Kurtosis. Two-way ANOVA was used to find the significant difference in the level of Life Satisfaction among Birth order categories with respect to Locus of Control.

RESULTS AND DISCUSSION

Table 1.1 Descriptive statistics of the variables for male participants

Life Satisfaction	Birth order	Locus of control	n	Mean	Standard Deviation
First born	Internal	10	23.20	4.392	
	External	4	27.75	6.602	
	Total	14	24.50	5.288	
Middle born	Internal	10	25.50	7.878	
	External	4	23.25	8.884	
	Total	14	24.86	7.892	
Last born	Internal	5	27.00	5.958	

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Life Satisfaction	Birth order	Locus of control	n	Mean	Standard Deviation
Total	External	External	8	26.25	4.559
		Total	13	26.54	4.909
	Internal	Internal	25	24.88	6.220
Total	External	External	16	25.87	6.087
		Total	41	25.27	6.112

Table 1.1 shows the descriptive statistics of the variables for male sample. The mean score of First born male with Internal locus of control with respect to Life satisfaction ($M = 23.20$, $SD = 4.392$); the mean score of First born male with External locus of control with respect to Life satisfaction ($M = 27.75$, $SD = 6.602$); the mean score of Middle born male with Internal locus of control with respect to Life satisfaction ($M = 25.50$, $SD = 7.878$); the mean score of Middle born male with External locus of control with respect to Life satisfaction ($M = 23.25$, $SD = 8.884$); the mean score of Last born male with Internal locus of control with respect to Life satisfaction ($M = 27.00$, $SD = 5.958$); the mean score of Last born male with External locus of control with respect to Life satisfaction ($M = 26.25$, $SD = 4.559$).

From the above table it can be seen that first born males ($M = 27.75$) are higher on external locus of control while Middle born males ($M = 23.25$) and last-born males ($M = 27.00$) are higher on Internal locus of control when compared with first borns. In total, it can be seen that males are higher on External locus of control ($M = 25.87$).

Table 1.2 Levene's test of equality of error variances for male participants

Life Satisfaction	df1	df2	F	Sig.
	5	35	1.561	.197

The table 1.2 shows the Levene's test of equality of error variances which reflects the homogeneity of variance in the obtained data. The test indicates, $F(5, 35) = 1.561$ with $p = 0.197$ for Males which is not significant at $p > 0.05$ and hence, equal variance between the groups can be assumed. Hence, the assumption of homogeneity of variance is not violated. Hence, the assumption of homogeneity of variance is not violated.

Table 1.3 Two-way ANOVA: Test of Between-Subjects Effects among Males

Life Satisfaction	Independent Variables	Sum of squares	df	F	Sig.
	Birth order	30.034	2	.379	.687
	Locus of control	2.344	1	.059	.809
	Birth order* Locus of Control	73.277	2	.924	.406
Error		1387.700	35		
Total		27672.000	41		

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In table 1.3, the main effects and the interaction effects of the independent variables on the dependent variable are computed for each gender category. The main effect of Birth order on Life satisfaction in males is ($F = .379$, $p = 0.687$) at $p > 0.05$ indicating that there is no significant influence of Birth order on Life satisfaction. The main effect of Locus of control on Life satisfaction in males is ($F = .059$, $p = .809$) at $p > 0.05$ indicating that there is no significant influence of Locus of control on Life satisfaction.

The interaction effect of Birth order and Locus of control in males ($F = .924$, $p = .406$) at $p > 0.05$ indicating no significant interaction effect of Birth order and Locus of control on Life satisfaction in males. Thus, the hypothesis (H1): There will be a significant interaction effect of Birth order and Locus of control on Life Satisfaction among male young adults, is rejected.

Table 1.4 Post Hoc Tests (LSD) among Males

Life Satisfaction	Birth order (I)	Birth order (J)	Mean differences (I - J)	Sig.
First born	Middle born	-0.36	0.882	
	Last born	-2.04	0.406	
Middle born	First born	0.36	0.882	
	Last born	-1.68	0.493	
Last born	First born	2.04	0.406	
	Middle born	1.68	0.493	

In table 1.4, Post Hoc test shows multiple comparisons and mean differences between each sub category of Birth order with respect to Males. It is seen from the above table that, there is no significant mean difference between Male firstborns and Male middle borns ($p = 0.882$); there is no significant mean difference between Male First borns and Male last borns ($p = 0.406$) and there is no significant mean difference between Male Middle borns and Male last borns ($p = 0.493$)

Table 2.1 Descriptive statistics of the variables for female participants

Life Satisfaction	Birth order	Locus of control	n	Mean	Standard Deviation
First born	First born	Internal	11	29.00	4.427
		External	5	26.60	3.435
	Total		16	28.25	4.187
Middle born	Middle born	Internal	8	26.88	6.334
		External	8	22.88	5.668
	Total		16	24.88	6.163
Last born	Last born	Internal	9	25.44	3.575
		External	8	23.50	5.127

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Life Satisfaction	Birth order	Locus of control	n	Mean	Standard Deviation
		Total	17	24.53	4.346
	Total	Internal	28	27.25	4.881
		External	21	24.00	5.010
		Total	49	25.86	5.148

Table 2.1 shows the descriptive statistics of the variables for female sample. The mean score of First born female with Internal locus of control with respect to Life satisfaction ($M = 29.00$, $SD = 4.427$); the mean score of First born female with External locus of control with respect to Life satisfaction ($M = 26.60$, $SD = 3.435$); the mean score of Middle born female with Internal locus of control with respect to Life satisfaction ($M = 26.88$, $SD = 6.334$); the mean score of Middle born female with External locus of control with respect to Life satisfaction ($M = 22.88$, $SD = 5.668$); the mean score of Last born female with Internal locus of control with respect to Life satisfaction ($M = 25.44$, $SD = 3.575$); the mean score of Last born female with External locus of control with respect to Life satisfaction ($M = 23.50$, $SD = 5.127$).

From the above table it can be seen that first born females ($M = 29.00$), Middle born females ($M = 26.88$) and Last born females ($M = 25.44$) are all higher on internal locus of control when compared to external. In total it can be seen that females are higher on internal locus of control ($M = 27.25$)

There is a mean difference between males with internal locus of control ($M = 24.88$) and females with internal locus of control ($M = 27.25$) which indicates that females are higher on the internal locus of control than are males. There is also a mean difference between males with external locus of control ($M = 25.87$) and females with external locus of control ($M = 24.00$) which indicates that males are higher on external locus of control than females.

Table 2.2 Levene's test of equality of error variances for female participants

Life Satisfaction	df1	df2	F	Sig.
	5	43	.799	.556

The table 2.2 shows the Levene's test of equality of error variances which reflects the homogeneity of variance in the obtained data. The test indicates, $F (5, 343) = 0.799$ with $p = 0.556$ for Females which is not significant at $p > 0.05$ and hence, equal variance between the groups can be assumed. Hence, the assumption of homogeneity of variance is not violated.

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Table 2.3 Two-way ANOVA: Test of Between-Subjects Effects among Females

Life Satisfaction	Independent Variables	Sum of squares	df	F	Sig.
	Birth order	96.503	2	2.004	.147
	Locus of control	89.611	1	3.722	.060
	Birth order* Locus of Control	9.407	2	.195	.823
Error		1035.172	43		
Total		34033.00	49		

In table 2.3, the main effect of Birth order on Life satisfaction in females is ($F = 2.004$, $p = 0.147$) at $p > 0.05$ indicating that there is no significant influence of Birth order on Life satisfaction. The main effect of Locus of control on Life satisfaction in females is ($F = 3.722$, $p = .060$) at $p > 0.05$ indicating that there is no significant influence of Locus of control on Life satisfaction.

The interaction effect of Birth order and Locus of control in females ($F = .195$, $p = .823$) at $p > 0.05$ indicating no significant interaction effect of Birth order and Locus of control on Life satisfaction in females. Thus, the hypothesis (H2): There will be a significant interaction effect of Birth order and Locus of control on Life Satisfaction among female young adults, is rejected.

Table 2.4 Post Hoc Tests (LSD) among Females

Life Satisfaction	Birth order (I)	Birth order (J)	Mean difference (I - J)	Sig.
First born	First born	Middle born	3.38	0.058
		Last born	3.72*	0.035
	Middle born	First born	-3.38	0.058
		Last born	0.35	0.841
Last born	Last born	First born	-3.72*	0.035
		Middle born	-0.35	0.841

*. The mean difference is significant at the 0.05 level.

In table 2.4, Post Hoc test shows multiple comparisons and mean differences between each sub category of Birth order with respect to Females. The LSD analysis results show that there is a significant mean difference in Life Satisfaction between Female first borns and Female last borns ($p = 0.035$). However, there is no significant mean difference between Female first borns and Female middle borns ($p = 0.058$); there is no significant mean difference between Female middle borns and Female last borns ($p = 0.841$).

DISCUSSION

Subjective well-being is a multi-faceted phenomenon that involves positive and negative affect, emotional responses and global judgement of life satisfaction and satisfaction in various life domains. Life satisfaction is thus, a subjective assessment of feelings and

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attitudes about one's life. Life satisfaction is a positive attitude towards life. There are various factors that contribute to life satisfaction. In the current study, Birth order and Locus of control have been considered as two factors that have an impact on life satisfaction. With this perception the current study aimed to explore life satisfaction among various birth order categories and to understand the influence of Birth order and Locus of control on Life satisfaction. Based on the review of past literature, it was hypothesized that both Birth order and Locus of control have an impact on Life satisfaction in males and females.

The study was conducted on 30 families with three siblings (first born, middle born and last born) which makes the sample size 90 and in the age range of 20 - 30 years. The sample comprised individuals who are students, working or non-working, individuals who are not adopted, whose parents are not separated, divorced or widowed and who belong to nuclear families. The data collected from these participants was further scored and analysed using Two-way ANOVA to understand the interaction effect of Birth order and Locus of control on Life satisfaction among males and females.

The results of the current study also found that there was a significant mean difference in life satisfaction between last born females and first-born females. First born females displayed higher levels of life satisfaction than last born females. These results can be supported with the fact that first born females showed higher internal locus of control than last born females and hence, the life satisfaction of first-born females could be higher. This is in accordance with a finding of another study which found that there was a positive relationship between Internal locus of control and Life satisfaction (Gohari, Bagheri & Kiyamanesh, 2014).

The results of the current study revealed that there are no significant differences in Life satisfaction between birth order categories among males (first born, middle born and last born) and females (among first born and middle born). This can be because all the siblings from a family have had similar parenting styles and because 97.8% of the data collected revealed that siblings lived together for more than ten years. Hence, from this it can be said that siblings had similar environmental conditions and they had inter-influence on each other which led to homogenous levels of life satisfaction. A past study revealed that same family characteristics do not significantly influence life satisfaction among siblings (Aldrich, 2015) and the results are consistent with the present study. These results can be supported with a previous study that implied that siblings' interaction on life satisfaction among young adults is relatively minor (McGhee, 1985). These results are also in congruous with another existing study that explored the influence of Birth order on adolescents' subjective well-being which revealed that there was no significant difference between birth order categories and their subjective well-being.

The first and second hypotheses which stated that there will be a significant interaction effect of Birth order and Locus of control on Life satisfaction among males and females respectively are rejected. It can be concluded from the previous research studies that while locus of control has an impact of life satisfaction, birth order does not have a significant impact and consequently, the interaction effect of these independent variables also have no significant impact on life satisfaction among males. The results of current study are in parallel to the finding of another study that implied that there is no significant gender difference and birth order difference in the level of subjective well-being and this study is compatible with the results revealed in the current study (Jie & Zilong, 2019).

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In the present scenario where the world is undergoing a global pandemic, various extraneous factors were at play including stress, change in learning mediums, shift in lifestyle, work life imbalance and reduced motivation among other things which were beyond control. All these factors could have affected the interaction effect of Birth order and Locus of control on Life satisfaction among males and females. A study explored how stress affects life satisfaction during COVID 19 and the results implied that stress and fear of COVID19 were negatively associated with life satisfaction (Dymecka et al., 2021)

Limitations

- Use of self-report measures may have contributed to errors in data collection. While taking feedback from the participants it was noticed that the questionnaire's length had introduced fatigue in them and hence might have contributed to biased responses.
- Lack of research studies in the area that threw a limelight on both Birth order and Locus of control having an interaction effect on life satisfaction had reduced the scope of discussion in the study.
- The sample for this study was limited to a small sample of 30 families (i.e., 90 siblings) of whom majority of the respondents were from urban regions of Telangana state, which restricts generalization of the study to other states and cultures.
- The key limitation of this research study was the influence of COVID - 19 pandemic. The pandemic restricted the accessibility in the process of data collection and may have had a negative impact on the dependent variable of this study - Life satisfaction. Factors such as perceived social isolation, limited human interaction, increased use of screens for academic or work purposes, physical health concerns and sleep cycle disturbances have been intensified during the pandemic and hence these factors could have had a negative influence on Life satisfaction.

CONCLUSION

The study aimed to investigate the impact of Birth order and Locus of control on Life satisfaction and the interaction effect of these two variables on Life satisfaction among males and females. The results of the study have reported that there is no significant interaction effect of Birth order and Locus of control on Life satisfaction among both males and females. The study further revealed that females have higher internal locus of control than males. There is a significant mean difference in life satisfaction between first born females and last born females. First born females are higher on the locus of control and thus have enhanced Life satisfaction. The study had few limitations such as biased data because of self report measures and the fact that the process of this study took place amidst a pandemic. Despite these limitations, the study provides significant understanding and adds to the existing literature on Birth order, Locus of control and Life satisfaction. The study provides a base work and renders a scope for future research which can be even more extensive and elaborative and hence makes it relevant to generalize.

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Conflict of Interest

The author(s) declared no conflict of interest.

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