THE PROGRESS: A Journal of Multidisciplinary Studies
Vol.6, No.2 (June, 2025), Pp.133-148
ISSN (Online): 2958-292X, ISSN (Print): 2958-2911
DOI: https://doi.org/10.71016/tp/57w7de60

Original Article **https://hnpublisher.com**

Impact of Birth Order on Social, Emotional Intelligences and Academic Achievement among University Students

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ABSTRACT

Aim of the Study: Alfred Adler, founder of "Individual psychology" highlighted the imperative role of birth order in shaping personality. So, the present study aimed to identify that academic achievement, social, emotional intelligences differ among university students based on the order in which they were born, gender and sibsize.

Methodology: Using cross-sectional research design, a purposive sample of 200 men and 200 women, aged 19-25 years (M = 20.89, SD = 1.55) was taken to examine differences in academic achievement, social, and emotional intelligence of young adults in first, second, middle, and last birth order. Participants filled out the structured and valid questionnaire and data analyzed via SPSS v 23.0.

Results: Results showed that first born were significantly high academic achievers F(3, 396) = 3.65, p = .03; while second born were more socially intelligent F(3, 396) = 2.96, p = .00 than other birth ranks, however no significant differences were detected for emotional intelligence among birth ranks. Further the impact of gender and sibsize was also examined.

Conclusion: The study could be helpful for parents, children, clinicians, counselors and other professionals to understand that birth order can be a vital factor in assessing their behaviors and personality traits. Limitations and recommendations for future studies are discussed.

Keywords: Birth Order, Social Intelligence, Emotional Intelligence, Academic Achievement.

Article History

Received:
March 28, 2025

Revised:
June 14, 2025

Accepted:
June 18, 2025

Online:
June 22, 2025

1. INTRODUCTION

According to Adler (1928), birth rate rank affects the child's academic, social, and emotional growth and learning throughout his or her life (Leman, 2009; Zajonc & Markus, 1975; Zajonc, 2001). This idea has enthralled many researchers who examine academic achievement (AA) with birth order (Downey, 2001). Nevertheless, there is lack of studies on the relationship between birth order and social intelligence (SI)

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and emotional intelligence (EI). Thus, this study concerns these areas, responding to Adler's (1928) theoretical assumptions, and comparing SI, EI, and AA in Pakistani adults.

1.1 Social Intelligence

The idea of SI was brought to the world almost one century ago by Edward Thorndike. In the 1920s, he divided intelligence into three categories: abstract intelligence or the ability to handle and comprehend concepts, mechanical intelligence or the ability to handle tangible items, and social skills (SI). According to Thorndike, SI is the ability to reason appropriately in interpersonal relationships. Thorndike's law of effect (1898) was one of the aspects of his Social Style Model that described why people establish consistent behavior patterns. Thorndike wrote several articles and books for forty years to expound on SI (Cantor & Khilstrom, 1987).

In 1927 Moss and Hunt and Vernon in 1933 defined SI as the power to live with other people, to be able to employ social techniques, to understand social issues, to be sensitive to in citations from other social groups, and to be able to grasp the transient feelings or the basic temperamental traits of strangers.

Following the World War II, many psychologists and researchers extended Thorndike's ideas in the analysis of human behavior and interactions, and studied SI theoretically and quantitatively, coming up with more elaborate definitions of the concept (Taylor, 1990; Walker & Foley, 1973). Guilford (1967) for example came up with the Structure of Intellect and at least 120 intellectual abilities, distinguishing between IQ and SI where semantic and symbolic contents were associated with abstract intelligence, the figural content area with practical intelligence and the behavioral area with SI. Hoepfner and Sullivan (1968) suggested six domains of SI: perceiving people's thoughts and feelings, forming social roles, comprehending patterns of meaning, adapting actions, and predicting consequences in social contexts. These social aspects of intelligence were beyond the traditional forms of intelligence.

Many researchers (Brown & Anthony, 1990; Cantor & Kihlstrom, 1987; Cantor et al., 1980; Kosmitzki & John, 1993; Marlowe, 1986; Neisser, 1979; Rosch, 1978; Schneider et al. , 1996; Sternberg, 1984) of cognitive psychology and psychometrics have stated

1.2 Emotional Intelligence

In the last two decades, there has been the introduction of a new dimension of intelligence known as "EI" which entails the ability to be able to recognize and regulate one's own and others emotions for the purpose of directing one's actions and thoughts.

According to Goleman (1995), EI was defined as the abilities to persevere and to be goal directed when frustrated, to manage impulses, to wait for what one wants, to regulate stress, to moderate emotions, and to think clearly while being empathetic and optimistic. Mayer, Salovey, and Caruso (2000) posited three models of EI, including the Ability Model (Mayer & Salovey, 1997) and two Mixed Models: These are Goleman's Model of Emotional Intelligence (1998) and Bar-On's Model of Emotional Intelligence (1997). Mayer, Salovey and Caruso (2004) also identified a fourth model of EI which includes abilities such as perceiving emotions, using emotions in problem solving, understanding verbal expressions of emotions and managing emotions to meet particular objectives.

Bar-On (2006) invested 17 years for the research on EI and constructed the Bar-On Emotional Quotient Inventory (Bar-On EQ-i) to assess EI, which includes five domains and fifteen sub-domains for adolescent and adult people (Bar-On, 2006; Plake & Impara, 1999). Using the Bar-On EQ-i, Batool and Khalid (2011) have formulated an inventory for assessing EI in Pakistani context. There are fifty six items and ten subscales in this questionnaire and they are interpersonal skills, self-regard, assertiveness, self-awareness, empathy, impulse control, flexibility, stress tolerance, problem solving skills and optimism. This instrument was highly reliable ($\alpha = .95$) with moderate validity ($r = .63$) (Batool & Khalid, 2011) necessary for measuring EI among Pakistani adults where higher scores represent higher EI.

1.3 Social vs. Emotional Intelligence

Bar-On (1997) opined that SI and EI are correlated, defining them as skills in regulating and communicating emotions, interpreting experiences, problem solving and optimism. Research findings have provided evidence to this effect, indicating that persons with higher EI possess better interpersonal social skills and are more responsive in interpersonal interactions (Mayer, 2008; Lopes et al., 2004). In a study conducted by Salovey and Grewal (2005), the students that were low in EI were involved in drug and alcohol use and also had poor relationship with their families and friends.

However, there are scholars who think that SI and EI should be distinguished. Kosmitzki and John (1993) and Kaukiainen et al. (1999) associated SI with moral, pro-social and ethical behaviours, less connected with the emotional aspect. Ruisel (2004) and Andrew (2008) considered SI as social manipulative, and different from EI. Frankovsky and Birknerova (2013) have introduced the scales to measure SI and distinguished it from EI. Similarly, in Pakistan, Habib et al. (2013) also considered SI as different from EI and constructed an instrument for SI components only in which five subscales were identified as separate from emotional ones. The scale demonstrated moderate to strong internal consistency (Cronbach's α = . 77-. 81) and higher values of SI were considered as desirable (Habib et al. , 2013). Thus, it can be concluded that there is a link between SI and EI but the latter is more oriented on care and concern for other people while the first one is related to the socially appropriate behavior.

1.4 Academic Achievement

There is a conceptual definition of academic achievement or AA that means the level of performance that a student avails in his or her academic activities, which may be well defines by the GPA attained in school, College and university levels and the results from the examinations and assessments throughout a continuous cycle of tests in the school, College or university (Stumm et al., 2011). This method is also used in this study to measure AA, in terms of Matric (High School), Intermediate (additional two years), Bachelors (four years after intermediate), and MPhil/MS (two-three years after Bachelors).

According to Midgley and Urden (2001) motivational purposes are some of the things that have been found to shape AA and this is usually referred to as the goal-orientation approach. Some of learning theories include Bloom, 1976; Bennett, 1978; Glaser, 1976; Harnischfeger, 1980 that posited that ability, motivation, quality and quantity of instructions are critical factors determining the students' performance academically (Haertel et al., 1983; Walberg et al. , 1986).

The literature also examines the part played by birth order in AA. Galton (1875) pointed out the fact that majority of the English scientists in his sample where first borns stating the fact that first borns take most of the parental attention hence perform better than the later borns in class and hence perform better (cited in Rohrer et al. , 2015). In a similar vein, Adler (1928) thought that first borns get good grades because they are paid close attention to and expected to perform better by their parents. It can be seen that AA is managed affected by numerous psychosocial factors such as birth order.

1.5 SI, EI, AA, and Birth Order

According to Adler (1926), intelligence or academic achievement is not a guarantee of problem-solving abilities especially in social issues as seen in the case of a highly academic boy who was a social misfit. Adler went further and said that social feelings and environments are inherent to individual psychology, encouraging people to be cooperative and loving. He distinguished between social interest and private interest pointing out that a single private interest is not useful if it is against the social interest.

1.6 Statement of the Problem

In Study 2, the participants' social intelligence, emotional intelligence, and academic performance will be compared across birth rank and the moderating effects of demographic variables will be examined.

1.7 Objectives

- To compare the level of social, emotional intelligences, and academic performance between students according to the birth order positions.

- To investigate the correlations between social, emotional intelligences and academic performance.

- To examine the demographic variables in social and emotional intelligences and academic achievement.

2. LITERATURE REVIEW

2.1 Social Intelligence and Birth Order

The studies conducted on the effect of birth order on social intelligence yield inconclusive results. There are those who have claimed that later-born children are more socially intelligent than their first-born counterparts while there are those who have not found any differences at all. Literature in the USA by Steelman and Powell (1985), Armitage (2007), Borne and Mears (2012) and other books by Leman (2009) and Forer (1977) depict different findings.

2.2 Social Intelligence and Demographic Variables

Gender: Research conducted by Saxena et al., (2010) in India showed that women are more socially intelligent than men while on the other hand research done by Habib et al., (2011) in Pakistan showed that men are more socially intelligent than women.

Sibsize and Family System: Researcher have found out that sibsize and family system have both positive and negative effects on SI (Rani et al., 2019; Singh et al., 2014)

2.3 Emotional Intelligence and Birth Order

Studies on EI and birth order are also inconclusive. According to some works, (Venkatrao, 2020; Viegas & Henriques, 2014; Lekavicienea & Antiniene, 2016) last borns have higher EI, while other works (Namdar et al. , 2008; Venkteshwar & Warrier, 2016; Rauf, 2015) revealed middle born possess more EI.

2.4 Emotional Intelligence and Demographic Characteristics

Gender: Research findings yield mixed findings on gender differences in EI. Some (Namdar et al. , 2008; Wee et al. , 2019; Jorfi & Jorfi, 2012) revealed no significant difference between the gender while others (Ajmal et al. , 2017; Venkteshwar & Warrier, 2016; Chaudhry et al. , 2013; Bibi et al. , 2016) Sibsize and Family System: Some studies found higher EI in children with fewer siblings (Barbera et al., 2014), while others found no significant differences (Wee et al., 2019). Family systems also show mixed results (Sahar & Muzzafar, 2018; Saleem & Gul, 2018).

2.5 Academic Achievement and Birth Order

In the following studies, the authors have looked at the impact of birth order on students' AA. Akgeyik (2013) in his study of 169 Turkish adults established that last born children had higher achievement scores than first and middle borns. This is in contrast to Adler's theory that first born children are usually overachievers. For instance, Baybay (2018) conducted a study with 263 university students in the Philippines and discovered that first-borns were more academically performing than the middle and last-borns. In the same vein, Hussain and Khan (2012) in their study of 100 engineering students in Pakistan noted that first born students had better academic performance than the later born students. Another cross-sectional study by Arshad et al. (2020) with students across seven European countries also found out that first-born children outperform later-born children in mathematics and reading literacy. However, there are some studies which does not support the above statement, for example Ha and Tam (2011) conducted a study in Malaysia, they did not find any difference in the first, second and third birth order students' academic performance.

2.6 Academic Achievement and Demographic Variables

The studies on the effects of demographic factors on AA also yield inconclusive results. While some of them, Akgeyik (2013) for instance, concluded that gender had no effect on academic performance, others including Alordiah et al. (2015) in Nigeria and Farooq et al. (2011) in Pakistan concluded that boys and girls respectively performed better than the other in their academics. Also, Nasiri et al. (2017) conducted a study in Iran which revealed that girls performed better than boys in medical and dentistry courses.

Other factors which have been considered in relation to AA including family size, Akgeyik (2013) established that family size does not have any impact on academic performance while Xu (2008) noted that children with more siblings and those with low SES were likely to have poor academic performance. Khan (2012) also revealed that large family size has negative effect on students' performance.

2.7 Social, Emotional Intelligence, and Academic Achievement

The research on the connection between SI, EI and AA has been conducted in many studies with various findings. Hansenne and Legrand (2012) in Belgium established that creativity and not EI was the determinant of school performance among the elementary students. On the other hand, Azizi (2013) in Iran only revealed that EI and social support only acted as mediators between IQ and AA in boys and only predicted AA in girls after controlling for gender and SES.

Noor and Hanafi (2017) also observed a positive correlation between EI and AA in university students in Pakistan and Nasir and Masrur (2010) also observed the relationship of EI and AA but not EI and gender and age. However, Malik and Shahid (2016) reported a low correlation between EI and AA in business students of Lahore, Pakistan.

Mohzan et al. (2013) in Malaysia and Adnan et al. (2012) in Afghanistan and Pakistan reported non-significant correlation between EI and AA. However, Shipley et al. (2010) in the USA have noted that EI is important, it is not critical to success at school

This is in line with the findings of Harriott (2014) that social reality shapes the understanding and regulation of emotions hence supporting the link between SI and EI. Nevertheless, the majority of the studies do not provide evidence for the correlation between EI and AA, and there is scarce literature on the connection between SI and AA.

2.8 Hypotheses

- Second and middle birth orders would score higher on SI and its components (SM, SS, EX, SE, and SA) than first and last borns.
- Last borns would score higher on EI and its components (IS, SR, EM, ESA, A, IC, F, PS, ST and O) than first, second, and middle borns,
- First born would score higher on AA than second, middle, and last-born.
- There will be a positive association between SI and EI, but SI and EI will not correlate with AA.
- Gender and sibsize will reveal differences in SI, EI, and AA of participants.

3. METHOD

3.1 Research Design

Cross sectional research design was used as the prime aim of the current study was to find out differences among young adults in different birth order positions (first, second, middle, and last born) with respect to AA, SI and EI.

3.2 Sampling Strategy

Participants were chosen through purposive sampling technique, and care was taken to sample all birth ranks equally.

3.3 Participants

A sample of 400 young adults (men = 200 and women = 200) was taken. Equal number of first (n = 100), second (n = 100), middle (n = 100), and youngest born (n = 100) participants were selected. Sample size was determined by applying G power analysis (Faul et al., 2009), which suggested 280 participants for applying omnibus one-way ANOVA with 4 groups. However, based on the requirements of study, 400 participants were selected.

3.3.1 Inclusion Criteria

A sample of 400 young adults with age range 19-25 years, was taken. There were 200 men and women with *M*age= 20.89, enrolled in government and private universities. The qualification level ranged from BS to MS.

3.3.2 Exclusion Criteria

Students of Psychology and students living in the hostels were not taken. Participants living with step parents (either mother or father), married and partially or full time employed were not selected. Few young adults having more than eight siblings were excluded. Participants whose father or mother died or divorced were not included in the study. Also, participants having age gap equal to or greater than five years from elder sibling were excluded.

3.4 Definition of Variables

3.4.1 Academic Achievement (AA)

In this study, Academic Achievement was measured by self-reported percentage marks obtained by the students in the previous semester they completed. For instance, the percentage scores that a student obtained in matriculation, intermediate and the latest semester at the university level were added and divided by 3 to obtain the overall academic achievement.

3.5.2 Social Intelligence (SI)

Social Intelligence was assessed with the Social Intelligence Scale by Habib et al. (2013). This scale, with a test-retest reliability of .88 and alpha reliability ranging from .77 to .81, evaluates the SI through five subscales. The scale was translated into English and Urdu to make sure that the participants understand the items that were presented to them.

3.5.3 Emotional Intelligence (EI)

Emotional Intelligence was assessed by the Emotional Intelligence Scale which was constructed and standardized by Batool and Khalid (2011). The scale has a high alpha coefficient of .95 with the options being from never to always. The questionnaire was in both English and Urdu to respect the participant's language choice.

3.6 Procedure

Consent was sought from the institutions and participants read the study's details and their right to withdraw was explained to them. Two questionnaires and a demographic information sheet were provided to the participants to fill. The data collection process was therefore quite easy and following the removal of invalid questionnaires, the researcher was left with 400 questionnaires to analyze. The data were analyzed using IBM SPSS V23.0.

3.7 Statistical Analysis

Descriptive statistics were used to describe the participants' characteristics, ANOVA was used to determine the differences in AA, SI, and EI by birth orders. In the present study, Pearson correlation analysis was employed in order to determine the correlation between SI, EI, and AA. This approach helped in explaining the impact of birth order on academic, social and emotional development of young adults.

4. RESULTS

The following presents a separate set of analyses that employed ANOVAs and *t*-tests to evaluate SI, EI and AA measures to assess hypotheses.

Table 1: *One-way ANOVA for Social Intelligence and Subscales across Birth Order*

Measure	***FB***	***SB***	***MB***	***LB***	***F***	***p***
	M(SD)	***M(SD)***	***M(SD)***	***M(SD)***		
SI	91.72(17.05)	97.62(16.14)	91.17(17.28)	91.94(19.59)	2.96	.03*
SM	12.20(5.61)	14.41(7.56)	11.94(5.00)	12.22(4.94)	7.87	.00*
SS	50.11(11.60)	54.35(12.64)	50.96(11.62)	50.00(11.59)	3.72	.01*
SA	21.21(4.96)	23.18(4.44)	22.13(5.04)	22.17(5.25)	2.65	.03*
SE	11.91(1.92)	12.00(1.43)	12.01(1.43)	11.98(1.91)	.93	.42
EX	23.76(4.56)	23.10(4.58)	22.06(4.03)	21.66(3.09)	.89	.44

*p<.05

Note. FB = First Born; SB = Second Born; MB = Middle Born; LB = Last Born; SS = Sum of Squares; MS = Mean of Squares; F = ANOVA; SI = Social Intelligence; SM = Social Manipulation; SS = Social Skills; SA = Social Adaptability; SE = Social Empathy; EX = Extroversion

Results indicated significant main effect of birth order for composite score of SI, F (3, 396) = 2.96, p < .05. Further, post-hoc Tukey HSD comparisons showed that second born (M = 97.62, SD =16.14) were more socially intelligent than first (M = 91.72, SD = 17.05), middle (M = 91.17, SD = 17.28), and last born participants (M = 91.94, SD = 19.59) while no significant differences were seen among first, middle, and last born for SI. Hence, the second hypothesis that second, middle, and last-born participants will be more socially intelligent than first born was partially accepted.

Table 2: *One-way ANOVA for Emotional Intelligence and Subscales across Birth Order*

Measure	***FB***	***SB***	***MB***	***LB***	***F***	***p***
	M(SD)	***M(SD)***	***M(SD)***	***M(SD)***		
EI	78.98(9.02)	81.43(11.02)	79.47(9.56)	80.00(10.80)	1.09	.35
IS	15.66(4.99)	14.62(5.01)	14.80(5.00)	15.04(4.99)	.31	.81
SR	16.31(2.99)	16.71(2.78)	16.54(2.25)	16.80(2.81)	.62	.59
EM	15.52(2.94)	16.34(3.05)	15.43(2.87)	15.66(3.37)	1.80	.14
ESA	14.78(2.20)	14.71(2.65)	14.44(2.54)	14.90(2.75)	.58	.62
A	19.280(3.08)	20.15(4.06)	20.05(3.36)	19.59(3.70)	1.29	.27
IC	13.09(2.34)	13.52(2.78)	13.01(2.61)	13.05(2.77)	.80	.49
F	11.50(1.17)	13.79(2.31)	11.00(1.00)	11.42(1.00)	3.80	.00*
PS	12.67(2.02)	13.31(2.50)	13.27(2.47)	13.15(2.35)	1.57	.19
ST	13.87(2.86)	14.12(2.97)	13.39(2.79)	14.04(2.84)	1.59	.18
O	15.52(2.94)	16.34(3.05)	15.43(2.87)	15.66(3.37)	1.80	.14

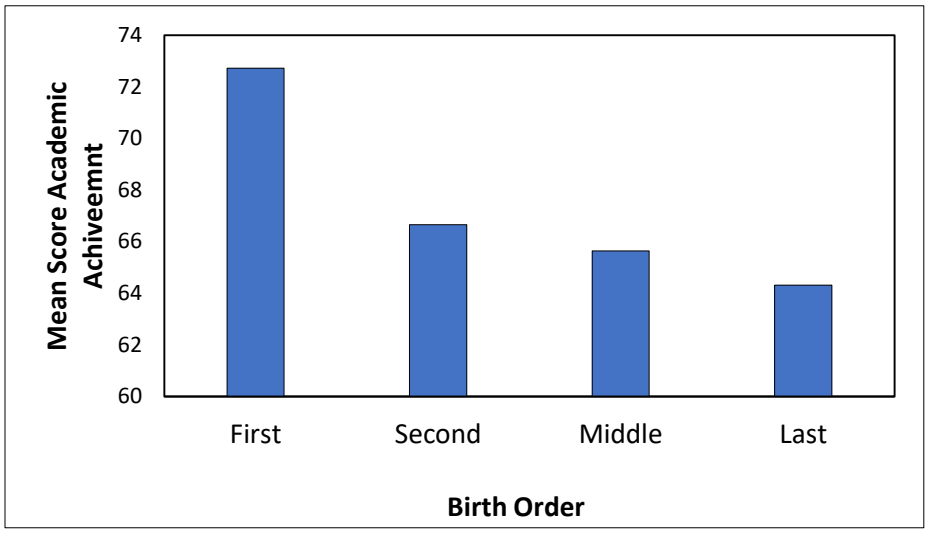
*p<.05

Note. FB = First Born; SB = Second Born; MB = Middle Born; LB = Last Born; SS = Sum of Squares; MS = Mean of Squares; F = ANOVA; EI = Emotional Intelligence; EIS = Emotional Intelligence Scale; IS = Interpersonal Skills; SR = Self-Regard; EM =Empathy; ESA = Emotional Self-Awareness; A = Assertiveness; IC = Impulse Control; F = Flexible; PS = Problem Solving; ST = Stress Tolerance; O = Optimism

Results did not reveal any significant ($p < .05$) differences in birth order for composite scores of EI, and subscales IS, SR, EM, ESA, A, IC, PS, ST and O. Since main prediction about EI was disconfirmed. However, For flexibility, there was significant main effect for birth order $F(3, 396) = 3.80$, $p < .05$, and post-hoc comparison revealed that second born ($M = 13.79$, $SD = 2.31$) were more flexible than first ($M = 11.50$, $SD = 1.17$), middle ($M = 11.00$, $SD = 1.00$), and last born ($M = 11.42$, $SD = 1.00$), thus not confirming our hypothesis, because last borns did not score higher than first, second, and middle borns.

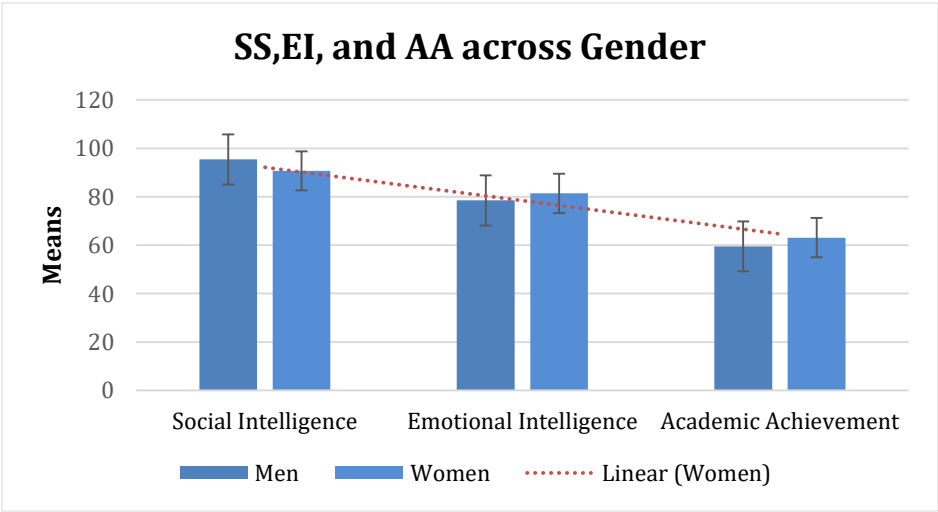
A significant main effect for birth order was found, F (3, 396) = 3.65, $p < .05$. Post-hoc Tukey HSD comparisons showed that first born participants ($M = 72.72$, $SD = 11.39$) were high academic achievers than second ($M = 66.65$, $SD = 10.42$), middle ($M = 65.64$, $SD = 9.50$), and last born ($M = 64.31$, $SD = 8.36$), thus, confirming our hypothesis. However, there were no differences in academic achievement of second, middle, and last born (see Figure 1).

Figure 1: *Mean Scores for Academic Achievement across Birth Orders*



Note. The above graph indicated that first born scored higher on AA than later borns

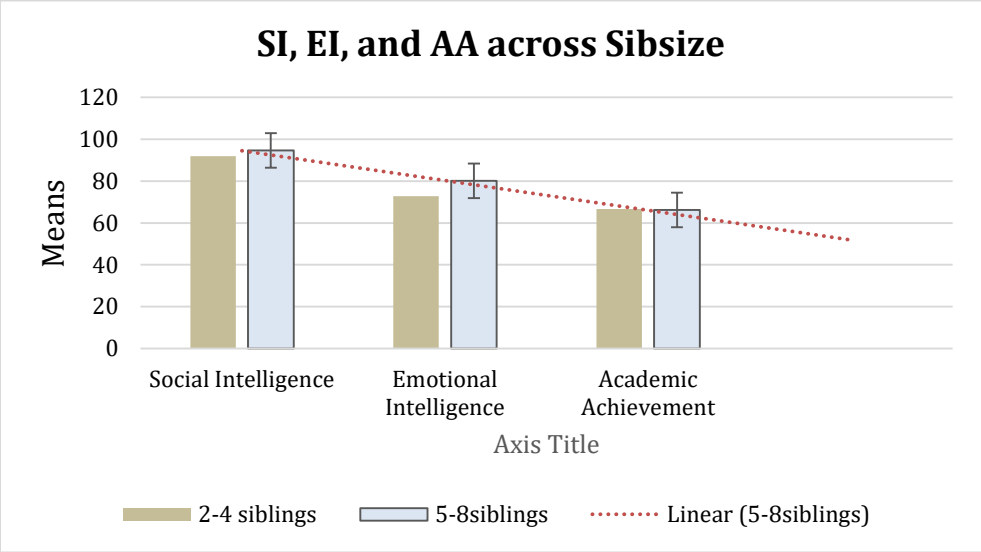
Figure 2: *SS,EI, and AA across Gender*



Results indicated that men (M = 95.40, SD = 17.60) were significantly $t(398)$ = -2.69, p < .001 more socially intelligent than women (M = 90.70, SD = 17.50) while women (M = 81.4, SD = 10.6) were significantly $t(398)$ = -2.92, p < .05 more emotionally intelligent than men (M = 78.50, SD = 9.40) and women also scored higher in academic achievement than men.

Thus, hypothesis was confirmed.

Figure 3: *SI, EI, and AA across Sibsize*



Participants with large sibsize (M = 94.70, SD = 18.30) were significantly $t(398)$ = -2.50, p < .001 higher in SI than small sibsize (M = 91.90, SD = 17.20) and large sibsize (M = 80.10, SD = 10.70) was significantly $t(398)$ = -3.45, p < .05 higher in EI than small sibsize (M = 72.80, SD = 7.70). however, no differences in AA were observed across sibsize.

5. DISCUSSION

In the second study, we wanted to compare the level of SI, EI and AA according to birth rank. The following discussion elaborates these analyses in light of literature that sometimes corresponds to what we found and other time does not.

5.1 Social Intelligence

It was established that second borns had higher levels of SI than other birth orders, thus the study supported their sociability attributes. The SI was the same for first-borns, middle-borns and last-borns and second-borns had higher scores on social skills (SS), social adaptability (SA) and social manipulation (SM). This goes a long way in supporting the hypothesis that second borns are more socially skilled and adaptive than first borns since middle borns were not find out more socially intelligent which disconfirmed the hypothesis. The study supported the hypothesis partially that birth order, especially second-born, has a strong bearing on the social intelligence.

The research also showed that men obtained higher mean score in SI than women while most studies depict women as more socially intelligent. The difference might be caused by the SI scale used which contains such traits as manipulation and extraversion. As hypothesized, there was a positive correlation between sib-size and SI, indicating that siblings in large families are more developed socially and are more adaptable.

5.2 Emotional Intelligence

The study on EI showed that there were no significant differences in EI or its subscales for first, second, middle, or last-born people. This went against the hypothesis that last-borns would have higher scores on EI as compared to middle children. However, second-borns scored significantly higher on the flexibility and it can be attributed to the social aspect in terms of the family. Contrary to other literature that posited that last-borns are more empathetic and cooperative, the study did not find significant differences in self-awareness or interpersonal skills based on birth order. Gender differences were observed whereby female subjects had higher EI scores than the male subjects as supported by literature that women are more emotional. Also, participants from families with 5-8 members including siblings had higher EI, which may indicate that a large family fosters development of empathetic abilities. On the other hand, there were no significant effects found on the EI concerning the participant or parent education, family income or institutional connection. These results indicate that perhaps, family structure and gender stereotyping may even play a significant role in determining the level of emotional intelligence than the birth order or education.

5.3 Academic achievement

In the study on academic achievement (AA), the hypothesis was that first born students perform better than second, middle and last born students and this was in agreement with Adler's theory that first borns are given more attention and are expected to perform better. This tallies with several researches whose findings indicate that first borns normally perform better academically because they enjoy more parental resources and attention. On the other hand, some studies have revealed that last-borns may perform well in school to outdo siblings or because they are treated equally by parents

Demographic factors revealed significant influences: in general women performed better than men in their academics this could have been due to discipline and seriousness in their books. Maternal education had a positive relationship with the academic performance of the students while paternal education did not have any effect on the performance of the students. Surprisingly, participants from the low SES performed better than those from the high SES, perhaps because of higher motivation or better learning conditions in deprived environment.

This study also revealed that the participants' education level, type of institutions, family system, number of siblings, and subjects had no effect on the performance. This means that birth order is still an important determinant of academic performance, and this outweighs other demographic attributes.

5.4 Social Intelligence, Emotional Intelligence and Academic Achievement

The purpose of the study was to determine the correlation between social intelligence (SI), emotional intelligence (EI), and academic achievement (AA). That is why it discovered that although SI and EI are positively linked, none of them had any significant relationship with performance. This is in support of Adler's opinion that academic success is a better correlate of intelligence than social or emotional intelligence.

Studies have backed up the notion that people with high levels of empathy are more socially competent and less likely to be aggressive while others distinguish between EI as the ability to understand emotions and SI as the ability to understand people. The study also revealed that first born are always intelligent in their studies compared to second borns who were proved to be socially intelligent. In regards to birth orders, there were no significant differences in the scores of emotional intelligence. Further, it was found that gender and sib-size had an effect on both SI and EI, while many other factors did not have an effect. In general, the present study supports Adler's hypothesis that there is low correlation between SI/EI and academic performance.

6. RECOMMENDATIONS

Samples based on within-family design and are studied longitudinally; valuable information on birth order can be amassed. Measuring multiple time points when sibling cohorts grow would not only differentiate personality traits, abilities and other psychological factors but would also give an ontological profile of how these measures would change across birth orders.

A systematic meta-analysis can also be carried out for future studies.

Other recommendation would be to collect data from clinically challenged individuals and compare them to normal individuals. An interesting study could be carried on sister-sister and brother-brother or other combinations of siblings including step brothers and sisters. Certainly, studies could include urban and rural areas of Pakistan to expand generalization of Adlerian theoretical position on birth order. Birth order studies can also be expanded to encompass various races, different cultures, ages, socio-economic status, education, and family environment.

7. IMPLICATIONS

Adler's theory of personality offers a quick way of assessing personality; by simply knowing birth order a host of personality factors can be identified, like scholastic achivement, social and emotional intelligence. This could provide clinicians, counselors and other professionals in the behavioral and social fields to understand personality. Family therapists and counselors can also assist the clients to sought out their problems by focusing on their birth order related issues The study can also educate parents what to expect when engaging with their children and to know how it could be useful in gauging their development as the years ensue.

Studying innovative, positive, and constructive aspects to understand birth order characteristics opens new ways for the betterment of society.

Acknowledgments

None.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Funding Source

The authors received No funding to conduct this study.

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