



Impact of Birth-Order on Social Intelligence: A Comparative Study

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Abstract: Social intelligence is ability that includes assessing social contexts, interpreting non-verbal cues, self-regulating, and developing relationships (Thorndike, 1920; Silvera et al., 2001). Birth order contributes significantly to the development of personality traits (Adler, 1927; Sulloway, 1996). In this study, the relationship was examined between birth order and social intelligence in young adults by comparing first, middle, last, and only child individuals. The researcher employed a quantitative research design using standardized measures of social intelligence to collect data which were analysed using both descriptive and inferential statistics. The results indicated that there are differences in social intelligence amongst individuals from different birth order groups which implies that being born into a particular order of siblings may influence one's ability to interact with other people on an interpersonal level. This study supports the idea that there might be an association between birth order and the social experiences related to social intelligence while focusing on the many other factors that influence an individual's development. This paper adds to the research on how birth order and family dynamics relate to individual development, as well as offering new options for both educational and psychological practices (Goleman, 2006; Bronfenbrenner, 1979).

Keywords: *Birth Order, Family Dynamics, Personality Development, Social Intelligence, Young Adults*

1. Introduction

People are social beings, based partly on how much we need others to grow and function daily (Aronson, Wilson, & Akert, 2019). We form relationships with many different

types of people every day to live effectively. There are very few people who can successfully live in the modern world without having at least a few significant social connections with other people (Myers & Twenge, 2018). The social environment includes all the places where we have contact with people, including family, peers, workplace, culture, and community (Bronfenbrenner, 1979). The social environment has a major impact on developing an individual's ability to understand others, communicate, and maintain relationships (Vygotsky, 1978). People can develop empathy, work cooperatively, and manage conflict in a supportive family and interactive environment (Bandura, 1986; Goleman, 2006). The cultural context also has an impact on how individuals behave socially. For example, the culture of Japan often emphasizes a collective responsibility and a sense of harmony, whereas the culture of the United States frequently emphasizes self-expression and independence; these cultural differences affect how social skills are expressed (Triandis, 1995; Markus & Kitayama, 1991).

Edward Thorndike was the first to create the term social intelligence in 1920; he explained how this form of intelligence is created through one's ability to work with people, therefore helping to create an environment in which there is a greater likelihood of social cooperation, less social conflict, and greater mutual respect (Goleman, 2006). Individuals must be able to interact successfully with others in a social system, and not only the ability to solve problems, but the ability to have successful interactions with others to adjust in that system (Cantor & Kihlstrom, 1987). Social intelligence is increasingly recognized in psychology, education, and organizational behaviour as a contributing factor to social adjustment, effective leadership, positive emotional health, and better quality of relationships (Riggio, 1986; Goleman, 2006).

Family environment, the order of birth, friendship, attachment, and personality traits are just a few of the elements that lead to the growth of social and emotional intelligence (Bowlby, 1969; Adler, 1927). Birth Order is a potential catalyst for personality and social growth (Adler, 1927; Sulloway, 1996). Theoretical concepts suggest that different sibling positions designs different roles and expectations from family members during development, therefore influencing development of interpersonal behaviours (Adler, 1927). Though there are conflicting views about the actual influence birth order has upon an individual (Ernst and Angst, 1983; Rohrer, Egloff, & Schmukle, 2015), examining its relationship to social intelligence can provide a better understanding of how the family structure may affect the individuals' development of socially and emotionally mature relationships with others.

Social Intelligence has evolved from its original concepts of inter-personal ability towards a more complicated view that includes numerous cognitive competencies and

emotional and behavioural aspects (Thorndike, 1920; Marlowe, 1986). Thorndike (1920) identified social intelligence as the ability to accurately assess and manage the behaviour of others. Marlowe (1986) identified an individual's ability to empathise, their social skills, their expressiveness, and their confidence in social situations as contributing factors to social intelligence. Recent research has proposed a broader definition of social intelligence, including the ability to acquire skills necessary for successful adaptation to new environments (social adjustment), resolving conflicts effectively, communicating successfully, and building and maintaining friendships and other types of relationships (e.g. family, work, etc.) (Silvera et al., 2001). Individuals who are higher in social intelligence tend to exhibit greater levels of empathy and adaptability and typically be more successful in how they interact with and relate to other people (Goleman, 2006; Riggio, 1986).

Alfred Adler's theory of Individual Psychology suggested distinct characteristics associated with the first-born (e.g. taking responsibility for the family or acting as a leader), the middle-born (e.g. being adaptable or diplomatic), the last-born (e.g. being outgoing or creative), and the only born (e.g. being very mature or verbal) child (within a family) (Adler, 1927; Sulloway, 1996). Sulloway (1996) also theorised that competition among siblings may have a significant effect on differing patterns of personality development. Although research on the relationship between birth order and personality development has produced inconclusive results (Ernst & Angst, 1983), several studies suggest that distinct birth order positions may be associated with some modest differences in social behaviour, achievement motivation, and interpersonal style (Sulloway, 1996).

According to Kumari et al. (2018) in their article A Comparative Study of Personality of Adolescents from Four Different Social Classes of Family Across Their Birth Order, there are significant personality differences between first born adolescents and later born siblings in terms of academic success, leadership ability, competitiveness, enthusiasm, emotional response, overall abilities, innovativeness, maturity, mental wellness, morality, impulse control, sensitivity, independence, and warming behaviors toward other people.

Birth Order and Social Intelligence

Although the relationship between birth order and social function has been examined previously, studies have focused on sibling interactions contributing to skills such as empathy, negotiation, cooperation and conflict resolution (Adler, 1927; Sulloway, 1996). Results from research on this topic have not provided consistent evidence, which indicates a need for further examination (Rohrer et al., 2015). Birth Order and Social Behaviour and emphasised the importance of sibling interaction in the socially responsive behaviours of first-born children.

Evidence from this research provides evidence of an over-representation of first-born children in advanced education and shows that these individuals tend to be more socially influenced than their later-born siblings (Warren, 1966).

There has been little to no research conducted on the direct relationship between birth order and social intelligence. While both social intelligence and birth order have been extensively researched, there appears to be very limited information regarding this relationship as it pertains to young adults.

2. Methodology

2.1 Research Design

The study adopted a quantitative descriptive-correlational research design to examine differences and relationships between birth order and social intelligence.

2.2 Sample

The study adopted a quantitative, descriptive and comparative research design. The sample size is of 118 participants who fulfilled the predefined inclusion criteria, including being within the age range of 18–25 years, belonging to intact families, and providing voluntary consent to participate. The sample collected by using the stratified random sampling technique.

2.3 Instruments

Social intelligence was assessed using a standardized and psychometrically established measure of social intelligence. Social intelligence scale developed by Dr. N. K. Chada and Dr. Usha Ganeshan was employed. Data collection occurred using the Social Intelligence Scale (SIS), created by Chadha and Ganesan (1986). The SIS is a set of 66 standard items measuring several aspects of social intelligence, such as patience, cooperation, confidence, sensitivity, recognition of social situations and situation specifics, tact, humour and memory, and is administered in a group format under standardised conditions, providing participants with clear instructions to enable the accuracy and objectivity of their answers; all queries arising from the administration were addressed for clarification.

2.4 Procedure

Data were collected via the consent of participants and questionnaires, and in accordance with ethical procedures. Data collection has been carried out in a systematic manner while ensuring participants' confidentiality. This study has been designed to investigate the effect of birth order on social intelligence. Research conducted using a descriptive, correlational & comparative design. The sample of participants chosen comprised 118 people

who met the inclusion criteria of being 18-25 years of age, coming from intact families and giving voluntary consent to participate. The sample used stratified random sampling. There was only one comparison between groups based on the variable of birth order and social intelligence and there is equal distribution across birth order groupings. Before selecting appropriate statistical tests, the distribution of data was examined using:

The significance values ($p < 0.05$) indicated that the data were not normally distributed. This step was crucial because it determined the choice of statistical techniques. Since the assumption of normality was violated, non-parametric tests were selected for further analysis. To examine whether social intelligence differed across birth order groups, the Kruskal-Wallis H test was applied. The obtained result: Chi-square value = 87.906, $p < 0.05$

This significant result indicated that: There are meaningful differences in social intelligence across birth order categories. This step directly supports the conclusion that birth order has an impact on social intelligence. To examine the relationship between birth order and social intelligence, Spearman's rank-order correlation (ρ) was used. The obtained result: $r = 0.638$, $p < 0.01$

A cross-tabulation was conducted to examine how participants in different birth order groups were distributed across levels of social intelligence. This step provided a detailed group-wise interpretation, supporting the statistical findings with descriptive evidence

3. Results

Analysis revealed differences in social intelligence levels across birth-order groups. First-born and last-born participants demonstrated comparatively higher social intelligence patterns, while middle-born participants showed average levels. Only-child participants showed variation that did not consistently support assumptions of lower interpersonal competence. Correlation analysis suggested a positive association between birth order and social intelligence, although the magnitude indicated that birth order may function as one contributing variable among many developmental influences. The findings partially supported the proposed hypotheses and indicated that family position may relate to interpersonal competencies, though not in a deterministic manner.

Table 1: Birth Order - Social Intelligence Crosstabulation

			Social Intelligence			Total
			Below Average	Average	Above Average	
Birth Order		Count	1	6	0	7

	Only Child	% within Birth Order	14.3%	85.7%	0.0%	100.0%
		% of Total	0.8%	5.1%	0.0%	5.9%
	First Born	Count	58	1	0	59
		% within Birth Order	98.3%	1.7%	0.0%	100.0%
		% of Total	49.2%	0.8%	0.0%	50.0%
	Middle Born	Count	4	29	0	33
		% within Birth Order	12.1%	87.9%	0.0%	100.0%
		% of Total	3.4%	24.6%	0.0%	28.0%
	Last Born	Count	2	16	1	19
		% within Birth Order	10.5%	84.2%	5.3%	100.0%
		% of Total	1.7%	13.6%	0.8%	16.1%
Total		Count	65	52	1	118
		% within Birth Order	55.1%	44.1%	0.8%	100.0%
		% of Total	55.1%	44.1%	0.8%	100.0%

Each subscript letter denotes a subset of Social Intelligence categories whose column proportions do not differ significantly from each other at the .05 level.

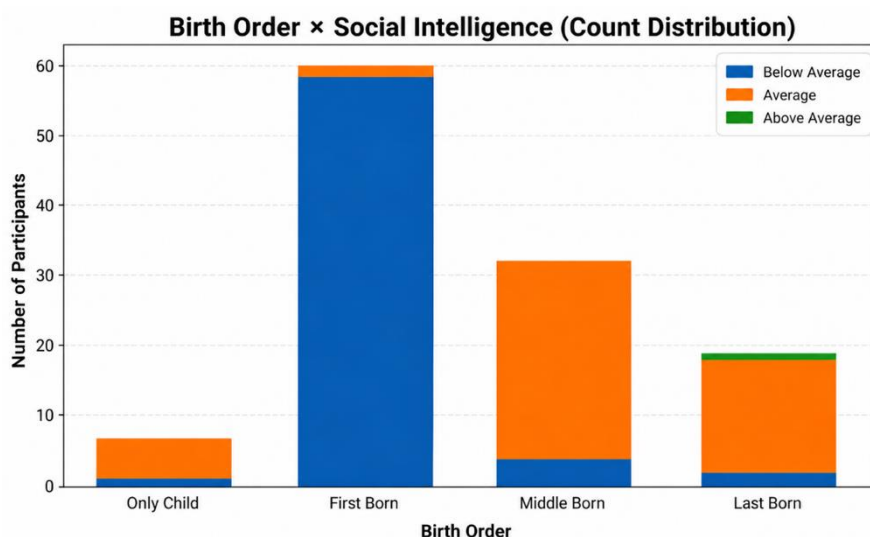


Figure 1: Birth Order - Social Intelligence Count distribution

4. Discussion

The current support for theoretical views argues that there may be some influence of birth order on social development. The differences in social intelligence among birth order groups may point to the varying degrees of social learning opportunities via sibling interactions and familial roles and expectations (see Adler, 1927; Sulloway, 1996). For example, the greater levels of interpersonal competence reflected by some of the first-born participants are likely related to increased opportunities to possess responsibility and leadership duties (Adler, 1927; Eckstein et al., 2010). In addition, the social goodness of fit that may be seen within many of

the later-born participants may correspond to the adaptation and sociability often associated with previous young sibling roles (Sulloway, 1996; Paulhus, Trapnell, & Chen, 1999).

The data does not support the finding that birth order is the only factor influencing the variation of social intelligence within this sample. This finding is consistent with current works of literature that elucidate the broader developmental impacts that may exist, such as parenting style and attachment security, as well as personality characteristics and social environment (Harris, 1998; Steinberg, 2001; Bowlby, 1988). Consequently, the data suggest that birth order is better understood as a contextual rather than fixed factor contributing to interpersonal competence (Damian & Roberts, 2015; Rohrer, Egloff, & Schmukle, 2015).

Understanding the social tendencies associated with birth order may provide valuable support to educators when developing programs aimed at enhancing the social skills of students. Programs that utilize family-related dynamics as a foundation for student level interventions facilitating the development of social competence and relationship skills (Goleman, 1995; Denham et al., 2003) would be beneficial. Connection of the social components of birth order with other constructs, including attachment, parenting style, emotional intelligence, and personality, would warrant additional research.

5. Conclusion

The conclusions drawn from this study show that birth order is reasonably associated with social intelligence. The position of a person in their family birth order is theorized to have an impact on the social experiences a person has as they develop and grow their interpersonal relationships; however, social intelligence develops from a result of the interactions between many psychological and environmental effects (Adler, 1927; Sulloway, 1996; Harris, 1998). The first-born has a tendency to show lower levels of social intelligence as compared to those of the other birth orders likely because of the pressures placed upon him/her to meet the expectations, responsibilities, and expectations of others, that are often associated with birth order. The same theories are proposed for the influence of the firstborn on the development of his/her social competence (Eckstein et al., 2010; Paulhus, Trapnell & Chen, 1999). The individual who is the middle-born has demonstrated an equal amount of social intelligence to that of the first and last-born because of the way they have learned to adjust, negotiate, and maintain social relationships, primarily through the mediating function he/she has filled in the family system (Salmon & Daly, 1998; Kidwell, 1982). Individuals born last have a tendency to show higher levels of social intelligence. This could be attributable to the greater number of opportunities for social interaction and orientation to peers afforded this group when compared

to the middle and first-birth-order children (Sulloway, 1996; Downey, 2001). The findings about only children suggest that only children generally demonstrate average levels of social intelligence and thus call into question the idea that the lack of siblings has a negative impact on social development. The average levels of social competence of only children appear to develop from other sources such as interaction with parents and peers (Falbo & Polit, 1986; Mellor, 1990).

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