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Big Five Personality Traits and Loneliness among Siblings of Individuals with Intellectual Disability

Abstract

Background

The complex role of a sibling in long-term caregiving and their experienced psychological distress is often overlooked by stakeholders, interventions, rehabilitative efforts and support systems for individuals with Intellectual Disabilities.

The study explores the Big Five Personality Traits profile and loneliness using the Revised NEO Five Factor Inventory and the UCLA Loneliness Scale, version 3, including the correlation between them. 30 adult siblings of the age group 18-51 participated in the study. The data obtained were subjected to the test of normality, descriptive statistics, t-test, and correlation analysis.

Results

High levels of Neuroticism, Low Extraversion, Average Openness to Experience, Low Agreeableness, Low Conscientiousness, and Moderately High levels of Loneliness among siblings of people with intellectual disability. Results suggest there is a significant relationship between Neuroticism, Extraversion and Loneliness individually.

Conclusions

The findings provide significant insights into the traits and mental health state, having implications for developing psychological and community support systems.

Keywords: Personality, Neuroticism, Extraversion, Loneliness, Intellectual Disability, Sibling

Introduction

Intellectual disability is among the most prevalent Neurodevelopmental Disorders with a global prevalence rate of 1%. The widespread presence of intellectual disability conditions is not accurately presented in the global census estimates. However, the incidence of

cases is understood as potentially considerably high.

The terminology and definition process [7 of intellectual disability](#) has observed a historical evolution. The term has evolved to be named Intellectual disability after sensitive and thoughtful consideration by the stakeholders of psychology. Intellectual disability, as defined by the American Association on Intellectual and Developmental Disabilities (AAIDD), is characterised by significant limitations in both intellectual functioning and adaptive behaviour (American Association on Intellectual and Developmental Disabilities, 2010) (Criteria, n.d.-a). The World Health Organisation (WHO), in its ICD-10, defines intellectual disability as a "condition of arrested or incomplete development of the mind, which is especially characterised by impairment of skills manifested during the developmental period, which contribute to the overall level of intelligence, i.e., cognitive, language, motor, and social abilities." Intellectual disability, as defined by the American Psychiatric Association, involves problems with general mental abilities that affect [12 functioning in two areas](#) often early in the developmental period. Intellectual functioning includes learning, problem-solving, and judgment. Adaptive functioning; activities of daily life such as communication and independent living ([What Is Intellectual Disability?](#) n.d.). This research paper focuses on the condition of intellectual disability with multiple etiological factors.

The characteristic features of intellectual disability explain the challenges posed by the condition towards the individual diagnosed with the condition, as well as the stakeholders in the individual's life. The challenges are better understood by acknowledging the temporal reality of the condition of Intellectual Disability that persists lifelong. Although the difficulties in dealing with the condition can be reduced or managed through developing specific skills, the idiosyncratic definite features inherent [5 with intellectual disability](#) condition are improbable alterations. Thus, the "life-long" nature of intellectual disability emphasises the lifetime support requirements and/or supervision to deal with the challenges presented by the condition.

Interventions for the Intellectually Disabled are evident in the existing services: Early

Intervention (within 6 years of age), Special Schools, Special Institutions, Vocational Training, and employability as part of the rehabilitative efforts. The significance of Social Support as an element in the strategies of intervention has not evolved globally. Social Support acts as a protective factor for Psychological well-being. The complex role of siblings in caretaking is often overlooked relative to the role of parents.

Research on families of individuals with intellectual disability has largely focused on parents, examining caregiver stress, mental health, quality of life, and adaptive coping processes. This knowledge was oriented towards equipping the parents and the body of knowledge of Psychology with information, resources, and skills for better management. Concomitantly, research also focuses on the innovative and efficient intervention strategies, early intervention strategies, management techniques, training, and mental health of professionals involved in education and intervention services to children and adults ⁵ with intellectual disability. The chronology of research of the recent past has extensively focused on the cognitive and functional limitations that people with intellectual disability inherently experience. The focus was extended to include research on the psychological distress experienced by the families of children and adults with intellectual disability, the existence and pervasiveness of neurotic disorders, stress, adjustment issues, emotional distress, and similar research along these lines.

The research on parents of children diagnosed with intellectual disability focused on the exploration of their personality traits on the 16 Personality Factors by Cattell. The revelations were that ⁵ children with intellectual disability showed more problematic behaviours whose parents were high on personality traits of Sensitivity and Openness to change (Santosh, 2020). In another study conducted by Gosztyła et al (2017), parents of children with intellectual disability and Autism Spectrum Disorder (ASD) experience moderate levels of loneliness. In another research, the lack of social support as a mediating role in experiencing loneliness, and the personality trait of extraversion among parents of children with ASD and intellectual disability. The results indicated that extraversion regulates the sense of loneliness in parents. (Gosztyła, 2019)

The trajectory of social support to people with intellectual disabilities often failed to consider the role of a sibling. The long-term view of caretaking and providing supplementary interventions is obliged to anchor the role of siblings of people with intellectual disability. The existing research on siblings is relatively limited compared to the extensive research on parents of people (children) with intellectual disability.

Attempts are made to recognise siblings' role in caregiving as well as sibling relationships and sibling dynamics, to attract the research attention. Sibling relationships are said to be the most fundamental family relationship across the lifespan, and are often a long-lasting relationship in an individual's life.

7 Two themes from psychoanalytic and ethological perspectives influenced early sibling research: (a) the significance of early experience and (b) the adaptive functions of social

behaviour. (McHale et al., 2012) (c). Siblings' characteristics could exacerbate the effects of stressful family circumstances on sibling ties (Stoneman, Brody, Churchill & Winn, 1999) (Effects of Residential Instability on Head Start Children and Their Relationships With Older Siblings: Influences of Child Emotionality and Conflict Between Family Caregivers on JSTOR, n.d.). The research on siblings with intellectual disabilities explained that the high quality of sibling relationships is said to mediate between personality traits and the development of coping strategies (Scigala et al., 2020). Understanding the moderating role of gender in siblings of adults with intellectual disability revealed that adult females with intellectually disabled siblings have higher anxiety levels (Prino et al., 2019).

Parents and siblings with direct kinship to people with intellectual disability are subjected to psychological distress and multiple mental health issues, often diagnosed with neurotic disorders such as Anxiety and Depression. The reason for the state of being is attributed to their physiological and psychological preoccupation, and additionally, the experiences that shape their dispositions.

Thus, the study focuses on one such disposition and state of being: Personality traits and Loneliness.

Personality

A trait is understood as an element of personality, sub-personality, or describable stable elements that characterise an individual. Personality traits operate as frames of reference, models of perception, patterns of behaviour, stable motivations, and systems of value. (Jordan B Peterson, 2017).

According to the ⁴ American Psychological Association, personality is "the enduring configuration of characteristics and behaviour that comprises an individual's unique adjustment to life, including major traits, interests, drives, values, self-concept, abilities, and emotional patterns" (APA Dictionary of Psychology, n.d.). Personality is influenced by various factors, including identification with significant individuals and groups, critical experiences, and relationships. The general view among various theories agrees on the behaviour-determining characteristic of personality.

Personality is structured in multiple ways by various psychological theories postulated thus far. The consensus, however, is that personality is a multi-dimensional phenomenon. The Big Five model of personality was first proposed by D.W. Fie (1949), serving as an alternative to other models. The research for the big five models of personality is supported and expanded by Norman (1967), Smith (1967), Goldberg (1981), and Costa & McCrae (1987).

⁸ The Big Five Model of Personality is also referred to as the Psychometric Model of Personality, as psychometrics have indicated that human personality can be specified along five basic dimensions. (Jordan B Peterson, 2017).

The Big Five Personality Traits, a part of the Five-Factor Model of personality, consist of Neuroticism, a general propensity to experience negative effects such as sadness, anger, disgust, guilt, embarrassment, and fear that is considered the core of the Neuroticism domain; Extraversion, a tendency for sociability, assertiveness, cheerfulness, and talkativeness. Introversion is the proclivity to be reserved, a preference to be alone, and even-paced. Openness: The behavioural elements are attentiveness to inner feelings, ²⁴ intellectual curiosity, aesthetic sensitivity, and active imagination. It is related to being

curious about both the inner and outer worlds and having experientially richer lives; Agreeableness, a primary dimension of interpersonal tendencies. This implies behaviours that are egocentric and sceptical of others' intentions. It is also indicative of the readiness to fight for one's interests and is related to assertiveness; and Conscientiousness, the process of planning, organising, being purposeful, strong-willed, achievement striving, self-discipline, and carrying out tasks, personality traits as detailed by Costa & McCrae (1992). The theory initially consisting of three ⁹ factors: Neuroticism, Extraversion, and Openness (1986), was updated with factors: Agreeableness and Conscientiousness (1989) (Libretexts, 2022).

¹⁷ The Big Five Factor model has relevance in understanding psychopathology and has neural correlates as identified by Neuroscience. (Kutta et al., 2020)

The Five Factor Model is not essentially a theory in itself, as it adopts the basic tenets of the 'Trait theory of personality' that individuals can be characterised in terms of relatively enduring patterns of thoughts, feelings, and actions. Thus, personality is the dynamic psychological organisation that coordinates experience and action (John et al., 1989). Five-Factor Theory (FFT) provides a framework to understand the development and operation of psychological mechanisms and the behaviour and experience of individuals. FFT is said to be a Grand theory as it attempts to provide information regarding the functioning of an individual throughout the lifespan. (Pervin & John, 1999b).

Loneliness

Loneliness, here, is understood as a state of being. The ⁴ American Psychological Association defines loneliness as an affective and cognitive discomfort or uneasiness from being or perceiving oneself to be alone or otherwise solitary (APA Dictionary of Psychology, n.d.-b).

Psychological research attention and the theoretical body of knowledge offer multiple perspectives: Social psychology emphasises that the needs for intimacy and companionship are inherent to one's being, and the failure to meet these needs results in emotional distress and loneliness. Cognitive psychology emphasises the unpleasant and

unsettling experience following ²² a perceived discrepancy (i.e., deficiency in quantity or quality) between an individual's desired and actual social relationships. Existential and Humanistic perspectives see loneliness as an inevitable, painful aspect of the human condition that nevertheless may contribute to increased self-awareness and renewal (APA Dictionary of Psychology, n.d.-b).

Sociologist Robert Weiss (1973) conceptualised loneliness as perceived social isolation in his theory of loneliness. Loneliness is characterised by three features: it is an experience, has a negative valence, and a discrepancy in perceived and actual/desired social relationships.

According to Peplau & Perlman (1998), loneliness is an unpleasant experience ²⁰ that occurs when a person's network of social relationships is significantly deficient in quantity or quality. The ⁶ discrepancy model of loneliness posits both the social needs perspective and the cognitive discrepancy model (Perlman & Peplau, 1998).

Loneliness, as an experience, is dependent on predisposing factors (characteristics of a person) and precipitating factors that interact with the discrepancy experienced in the need or desired social relations from Actual Social relations, with the presence of cognitive processes such as social comparison, and causal attribution.

Loneliness is characterised into two types based on the duration of the experience – State loneliness (situation-specific/short-lived), and Trait loneliness (long-lived or chronic). Social loneliness, as suggested by Weiss (1973), stems from the absence or deficiency of an adequate social network. The emergence of loneliness is rooted in the experiences in the family. Loneliness varies as a function of several demographic variables and life experiences (Peplau & Perlman, 1998). Loneliness manifestations are categorised into three, as given by Peplau & Perlman (1978): Affective, Cognitive (and/motivational), and Behavioural.

¹³ Personality and Loneliness

As we've established in the discussion on loneliness experience, the antecedents include predisposing factors. As personality tends to function as a disposition to our behaviours,

we further understand the interconnection between personality and loneliness.

In a meta-analysis undertaken by Buecker et al. (2020b) to understand ⁶ individual differences in loneliness and big five personality traits, results show that factors Extraversion, Openness, Agreeableness, and Conscientiousness were negatively correlated to loneliness. Factor Neuroticism showed a positive correlation with loneliness. The results, therefore, indicated the significance and need for stable personality factors in explaining individual differences in loneliness. (Buecker et al., 2020b). Thus, providing insights into the correlation between the two, a causal effect ²¹ between loneliness and personality factors is not established.

In a research article by ¹³ Mund and Neyer (2019b), the role of Loneliness was explored in predicting personality traits. The results revealed that loneliness predicted the levels of each Big Five personality trait except Openness until five years later. Furthermore, there was a statistically significant effect ⁹ of loneliness on the development of Neuroticism and Extraversion. However, the significance was marginal in terms of effect size.

Research by Abdellaoui et al (2018) aimed to observe the ¹⁰ associations between Loneliness and Personality as mostly driven by a Genetic Association with Neuroticism.

The results concluded a strong correlation between Loneliness and Extraversion.

Independent of other personality traits, neuroticism showed a higher correlation with loneliness. The genetic correlation ¹⁸ between loneliness and neuroticism showed a significant reciprocal causal relationship and non-significant cross-trait assortative mating, implying that the relationship is substantially genetic. (Abdellaoui et al., 2019).

This writing attempts to understand the state ⁹ of loneliness and its correlation with the traits of personality.

Therefore, a need exists to understand the levels of loneliness in the specific population group of siblings with intellectual disability concerning their personality traits, as an attempt to formulate and provide community and clinical interventions. The focus of research on the social support system available to people with intellectual disability has to be extended to include the sibling population, who are responsible for active or passive caretaking shifts

on the collateral kinship.

There is an evident dearth of research on understanding the personality profile, loneliness levels, state and trait relationship, and gender differences among the social support systems of people with intellectual disabilities, especially siblings.

The present study aimed to examine Big Five personality traits and loneliness among siblings of people with intellectual disability, and to investigate how each personality characteristic is associated with loneliness in this group. The study also explored gender differences in personality traits, loneliness levels across gender similar and dissimilar sibling pairs.

Hypotheses

H1. Neuroticism will be positively correlated with loneliness among siblings of individuals with intellectual disability.

H2. Extraversion will be negatively correlated with loneliness among siblings of individuals with intellectual disability.

H3. Openness will be negatively correlated with loneliness among siblings of individuals with intellectual disability.

H4. Agreeableness will be negatively correlated with loneliness among siblings of individuals with intellectual disability.

H5. Conscientiousness will be negatively correlated with loneliness among siblings of individuals with intellectual disability.

H6. Loneliness will not differ significantly between gender-similar and gender-dissimilar sibling pairs.

Method

The study employed a cross-sectional descriptive correlational design.

Participants

This population-focused study consisted of 30 participants (15 male, 15 female), employed a purposive sampling technique to include adult siblings of individuals with intellectual

disability.

To participate in this study, individuals had to be resident Indian citizens aged 18 or older and have a sibling diagnosed ⁵ with intellectual disability, which presented as a primary condition or co-morbid with other Intellectual and Developmental Disabilities (IDD) or Neurodevelopmental Disorders such as Down syndrome, Autism Spectrum Disorder, Fragile X syndrome, or Cerebral Palsy.

Responses of individuals incongruent to the inclusion criteria, such as siblings diagnosed with intellectual disability or other Neurodevelopmental Disorders, Non-Indian citizens, including individuals with Overseas Citizenship of India (OCI), who currently do not reside in India, and siblings with intellectual disability who do not reside in India, were excluded from the study.

Measures

Sociodemographic Questionnaire

A sociodemographic profile was obtained on the siblings' age, gender, domicile, education and employment status. Additionally, clinical and demographic information regarding the individual with intellectual disability was also collected - such as their age, gender, severity of the intellectual disability and other comorbid diagnoses.

Revised NEO Five-Factor Inventory (NEO FFI)

A 60-item inventory developed by Costa and McCrae assesses an individual on ¹⁴ Big Five Personality domains: Neuroticism, Extraversion, Openness to experience, Agreeableness, and Conscientiousness. The NEO-FFI is a widely used psychometric instrument with well-established reliability and validity across diverse populations, both clinical and non-clinical.

¹⁹ UCLA Loneliness Scale (Version 3)

A 20-item self-report inventory designed to quantify the subjective feeling of loneliness or social isolation. Participants respond to a set of descriptive statements comprising feelings of loneliness and non-loneliness expressed through a 4-point Likert scale with response

options- Never (1), Rarely (2), Sometimes (3), and Often (4). Developed by Daniel Russell, Letitia A. Peplau, and Carolyn E. Cutrona (1996) at ²³ the University of California, Los Angeles, the scale is recognised for its high internal consistency and construct validity in assessing perceived loneliness.

Procedure

Informed consent was formally obtained from the participants, followed by a detailed Sociodemographic questionnaire, the self-administering NEO FFI and UCLA Loneliness Scale (Version-3). The study was conducted through online mode and telephonic interviews by reaching out to siblings of individuals with intellectual disability, identifying themselves as members of an online support group. Participants were also provided with adequate debriefing immediately after.

Data Analysis

Statistical Tests: Descriptive Statistics, Independent Sample T-test, Shapiro-Wilk Test of Normality, and Parametric test of Pearson Correlation Coefficient were operated through IBM SPSS Statistics v2

Ethical considerations.

Informed Consent was first established with the participants before stating their sociodemographic profile. Participants were assured of identity anonymity, Confidentiality of response outcome, and information provided. All data and response outcomes were stored on a password-protected file, accessible only to the primary researcher. Due to the sensitive nature of this research, each participant was briefed on the research objectives, the voluntary nature of their participation, the right to withdraw, the rationale behind the item stems, and the ethical procedures undertaken. Participants were given a debriefing after responding and provided with resources to receive psychological help or assistance contingent on an expressed need.

Results

Descriptive statistics, Tests of Normality, Correlation, and Independent T-tests were conducted.

Table 1: Participant Sociodemographics

N	Male	Female	No of siblings	5	with intellectual disability	severity.	Mean Age of Participants	Mean Age of siblings	with intellectual disability
30	15	15	Mild	Moderate	Severe		31.3	29.37	
5	16	9							

Table 1 shows the sociodemographics of the participants. The participants' ages range from 18 to 51 years, with a mean age of 31.3 years, a standard deviation of 8.47, and a range value of 32. The chronological age of siblings with Intellectual Disabilities ranged from 16 to 50 years, with a mean chronological age of 29.37.

Table 2: Descriptive Statistics on all variables

Variables	N	Mean	SD	Min	Max	Range	Skew	Kurt
Neuroticism	30	28.73	7.736	15	40	25	-0.305	-0.656
Extraversion	30	24.77	8.897	6	40	34	-0.093	-0.567
Openness	30	26.67	5.020	15	36	21	-0.306	-0.116
Agreeableness	30	31.33	4.318	22	40	18	0.257	-0.126
Conscientiousness	30	28.90	8.214	10	47	37	-0.275	0.323
Loneliness	30	51.77	14.075	28	75	47	-0.54	-1.142

Descriptive statistics for all study variables are presented in Table 2. The distribution of personality traits and loneliness was approximately normal, with skewness values within acceptable limits.

Table 3: Scores and Interpretation of Big Five Personality Traits and Loneliness.

Variables	N	Mean	SD	Range	Interpretation
Neuroticism	30	28.73	7.736	25	High
Extraversion	30	24.77	8.897	34	Low
Openness	30	26.67	5.020	21	Average
Agreeableness	30	31.33	4.318	18	Low
Conscientiousness	30	28.90	8.214	37	Low
Loneliness	30	51.77	14.075	47	Moderately High

* Interpretation based on manual norms.

Norm - referenced interpretations of Big Five personality scores and Loneliness are presented in Table 3.

The Shapiro-Wilk test of normality indicated that the distributions did not substantially deviate from normality. Therefore, appropriate parametric statistics were administered.

Table 4 Pearson correlation matrix for Big Five Personality Traits and Loneliness

Statistic	Variable	Loneliness
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r	Neuroticism	.489**
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Sig.	.006
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95% CI	[.16, .72]
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r	Extraversion	-.813**
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Sig.	.000
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95% CI	[-.91, -.64]
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r	Openness	-0.10
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Sig.	.605
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95% CI	[-.44, .27]
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r	Agreeableness	-.125
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Sig.	.510
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95% CI	[-.46, .25]
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r	Conscientiousness	-.251
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Sig. .180

95% CI [-.56, .12]

** - Significant at 0.01 level; * - Significant at 0.05 level

Table 4 presents the Pearson correlation coefficients examining the relationship between the Big Five Personality Traits and Loneliness. The r values indicate Pearson's correlation coefficients and represent the magnitude of the effect size. Neuroticism and loneliness ($r = .489$, $p = .006$), indicating a moderate to large effect size. Extraversion was significantly and negatively correlated with loneliness ($r = -.813$, $p < .001$), reflecting a large effect size. Openness, Agreeableness, and Conscientiousness showed small effect sizes and non-significant associations with loneliness ($p > .05$), suggesting comparatively limited relationships within the present sample.

Table 5 Gender Differences in Big Five Personality Traits.

Gender	N	Variable	Mean	SD	t score	df	Sig.
Male	15	Neuroticism	28.87	7.13	.097	28	.923
Female	15		28.60	7.86			
Male	15	Extraversion	25.67	8.88	.547	28	.588
Female	15		23.87	9.12			
Male	15	Openness	25.73	4.96	-1.09	28	.317
Female	15		27.60	5.06			
Male	15	Agreeableness	31.73	3.51	.501	28	.620
Female	15		30.93	5.09			
Male	15	Conscientiousness	27.53	8.34	-.909	28	.371
Female	15		30.27	8.13			

No significant gender differences were observed across Big Five Personality Traits. (see

Table 5)

Table 6: Gender differences in Loneliness.

Gender N Variable Mean SD t score df Sig.

Male 15 Loneliness 51.07 13.53 -.235 28 .816

Female 15 52.27 14.41

No significant gender difference was observed in Loneliness levels among participants (see Table 6)

Table 7. Comparing loneliness levels among similar and dissimilar gender sibling pairs.

Sibling gender pair group N Variable Mean SD t score df Sig.

Similar Gender 12 Loneliness 49.42 14.45 -.741 28 .465

Dissimilar Gender 18 53.33 14

Loneliness did not significantly differ between gender-similar and gender-dissimilar sibling pairs (see Table 7). The mean scores for both groups were comparable (see Figure 1)

Figure 1. Shows the mean scores of gender similar and gender-dissimilar sibling pairs in Loneliness

Discussion

The present study examined the relationship between personality traits and loneliness among siblings of individuals with intellectual disability. The participant's personality profile revealed high levels of Neuroticism, low extraversion, average levels of Openness to experience, low Agreeableness, and Low Conscientiousness. Additionally, a moderately high level of Loneliness was also reported. The findings indicate that Neuroticism had a significant positive correlation with Loneliness, and Extraversion had a significantly negative correlation with Loneliness. Other personality traits - Openness, Agreeableness, and Conscientiousness showed weaker or non-significant relationships with Loneliness. No significant gender differences were observed in personality profile and loneliness levels. No statistically significant difference was established in the levels of loneliness reported between gender-similar and dissimilar sibling pairs.

Big Five Personality Traits among siblings of people with intellectual disability.

Research shows personality traits affect an individual's reaction to stress and can predict long-term physical health (Leger et al., 2021). Neuroticism is considered relatively stable as a personality trait, having real-world implications and clinical significance. The sample scores indicate high trait Neuroticism. Although not ¹ a measure of psychopathology, a high score on Neuroticism as a personality dimension indicates risk towards certain neurotic issues, and in severe cases, may indicate psychiatric illnesses. High scores also imply the relative absence of emotional stability and the inability ² to deal with stressful situations without the proclivity to be rattled or upset. Thus signifying the critical implications regarding the mental health of the population. As individuals with the ascribed status of a sibling, it tints the perceptions of situations, oneself, and the world. ¹ Neuroticism is also related to experiences of psychological distress and multiple health issues, and often leads to a diagnosis of neurotic disorders such as Anxiety and Depression.

Results indicate low levels of Extraversion among the sample, implying the tendency for Introversion as a personality trait. The impact of this is seen in the behaviours of being

sociable, cheerful, and assertive. Introversion is not merely an absence of extraversion but a preference to be alone, reserved and even-paced. Extraversion has the potential to act as a protective factor, and a low score may have implications for help-seeking behaviours, interactions, and networking that could directly impact the lack of social support.

Participants reported average **2** levels of the trait. **Openness to experience:** The behavioural elements include attentiveness to inner feelings, intellectual curiosity, aesthetic sensitivity, and active imagination. This implies the proclivity for the curiosity of both inner and outer worlds and having experientially richer lives. Low levels of Openness imply a disposition to be conventional in behaviour and outlook. (Costa and McCrae, 1992). The ascribed status of one's birth as a sibling to a person with an intellectual disability might **1** **have the ability to** set life as unconventional in a sociological sense; the unconventionality observed in the institutions of family dynamics and identity. **The personality trait of** Openness is significant in recognising and explaining **the quality of** experiential living.

Results obtained indicate a low level of Agreeableness among participants. Agreeableness **as a trait** has implications in altruism, trusting capacities of an individual, and expressing assertive behaviour when the situation demands. Agreeableness is a primary dimension of interpersonal tendencies. Disagreeableness could imply behaviours that are egocentric and sceptical of others' intentions. **16** **It is also** indicative of the readiness to fight for one's interests and proclivity towards assertiveness.

Low levels of Conscientiousness were obtained among the sample. The behaviours and activities include planning, organising, being purposeful, being strong-willed, striving for achievement, self-discipline, and carrying out tasks, which are adversely affected by low levels of conscientiousness. This could be explained by the potential caregiving demands of meeting the sibling with intellectual disabilities' needs, shifting responsibilities, disrupted routines, and fewer opportunities for self-regulation and structured goal pursuit. The focus could be on flexibility and adaptability over discipline-focused behaviours such as planning and organising.

No significant difference was found in gender differences for each personality dimension.

The absence of gender differences suggests the psychological experiences of siblings could be shaped by family context - caregiving awareness, role adjustments, and concern for the sibling with intellectual disability, which may override typical gender based differences in development trajectory.

Loneliness among siblings of people ⁵ with intellectual disability.

The state of Loneliness is significant to understand as it enables us to be cognizant of the social lives of siblings of people with intellectual disability, in finding support, and in the quality of mental health status among siblings with Intellectual and Developmental Disabilities. Moderately high levels of loneliness were found among the participant sample. The implications are significant for the social lives and the quality of mental health of the participant sample. Among ¹⁹ the UCLA Loneliness Scale items, the statement most strongly reported by participants addressed the frequency of feeling like no one knows them, people are around them but not with them, feeling left out, feeling alone, interests and ideas are not shared among others surrounding them, and feelings of isolation from others.

Results could be analysed through the Family Systems Theory by Bowen, which explains the interconnectedness of Individuals in a family. A change in one person's functioning is predictably followed by reciprocal changes in the functioning of others (Introduction to the Eight Concepts — the Bowen Center for the Study of the Family, n.d., p. 1). The concepts of Triangulation and Differentiation of Self explain ¹⁶ the process of enmeshment and the development of self. Loneliness could stem from a low differentiation of self, where the individual's own needs are lost within the family's caregiving demands.

No statistically significant gender differences were found in loneliness levels reported. No statistically significant difference was found among loneliness levels between gender similar and gender-dissimilar sibling pairs, implying that a difference in gender between the sibling with and without disability is not related to the increased or decreased perception of Loneliness state. It is possible that the subtle nuances of gendered experiences and differences among siblings could be captured through a qualitative approach. However, a

larger sample size could provide for an accurate representation of statistical differences that could be analysed through the traditional care-taking roles assigned gender-based in the Indian society.

Correlation between ² Big Five Personality Factors and Loneliness among siblings of people with intellectual disability.

Research shows personality traits affect an individual's reaction to stress and can predict long-term physical health (Leger et al., 2021). The Loneliness state is significant to understand as it enables us to be cognizant of the social lives of siblings of people with intellectual disability, in finding support, and in the quality of mental health status among siblings with Intellectual and Developmental Disabilities.

The findings indicate that Neuroticism was positively correlated with loneliness, Within the context of having a sibling with intellectual disability, heightened emotional vulnerability, volatility, and reactivity may elevate risk to loneliness. This could only amplify concerns about family dynamics, responsibilities, and caregiving demands, thereby intensifying feelings of loneliness. Neuroticism is consistently ¹ associated with negative affect and interpersonal issues, both of which are known predictors of loneliness.

The present study found a strong negative association between Extraversion and loneliness. Extraversion showed an inverse relationship with loneliness. Introverted disengagement from being sociable could further isolate an individual, impacting their perceived social relationships. The behaviour patterns of sociability and tendency for social engagement may function as a protective factor against the experience of ² the severity of loneliness. The results obtained only emphasise the role of social networking and the need for sociopsychological interventions to promote research on siblings and build community-driven initiatives to address mental-health consequences. ¹ Due to the modest sample size, the association's magnitude must be cautiously interpreted; effect estimates may be unstable and require replication in larger populations.

The results are consistent and analysed using the Personality-Stress Coping Model by

Lazarus & Folkman through the Transactional Model of Stress and coping, which posits that stress is a result of the event's appraisal, not the event itself, as posited by this theory. The specific condition examined here is having a sibling with an intellectual disability. **2 Big Five Personality** Theory acts as an internal factor and influences the appraisal of events. **Neuroticism as a** trait acts as a disposition to interpret challenges as a threat, and Extraversion influences the help-seeking behaviour, secondary appraisal of finding social support and eventually coping strategies, further exacerbating the experience of loneliness.

1 The personality trait of Openness is significant in recognising and explaining **the quality of** experiential living. Agreeableness **as a trait** has implications in altruism, trusting capacities of an individual, and expressing assertive behaviour when the situation demands. **The personality trait of** Conscientiousness functions in the physiological health of the siblings, self-regulation, self-control, and self-discipline.

Openness, agreeableness, and conscientiousness showed associations with loneliness in the expected directions, but these relationships were not statistically significant. Although the directions aligned with theoretical expectations as discussed earlier in this study by the meta-analysis by Buecker et al. (2020b), to understand **6 individual differences in loneliness** and **big five personality traits**, results show that factors Extraversion, Openness, Agreeableness, and Conscientiousness were negatively correlated to loneliness. Factor Neuroticism showed a positive correlation with loneliness.

The lack of statistical significance suggests these traits may play a weaker role overall. The statistically non-significant correlations could be a consequence of the limited sample size being unable to accurately show **1 the strength of the** effect between the two variables.

The sample demographic elements, such as their occupation, educational background, socioeconomic status, living arrangements, and family dynamics, could have influenced the scores on **2 dimensions of personality and** loneliness reported.

In the context of Indian society, the present findings may also be interpreted within a collectivistic cultural framework and Dharma (moral duty), wherein the emphasis is on

familial interdependence, shared responsibilities, caregiving responsibilities, and relational obligation. Siblings of individuals with Intellectual Disability may experience implicit caregiving expectations and emotional role shifts, which may shape their experiences of loneliness and psychosocial adjustment. Unlike Western individualistic models, Indian siblings often face "enforced caregiving" roles **1 due to the** lack of formal state support, leading to a unique form of familial enmeshment described in Bowen's theory. The interaction between these factors could explain the feeling of "lonely-in-a-crowd" phenomenon wherein family enmeshment exists in parallel with the feeling of isolation from peers.

Conclusion

This research attempted to understand siblings in two contexts: (a) as an individual, with the ascribed status as a sibling of a person with an intellectual disability. (b) As long-term active or passive caregivers to their siblings **5 with intellectual disability.**

The social support systems available in the Indian context are primarily and solely directed towards parents of children with Intellectual and developmental disabilities. The interventions available to rehabilitate a person/child with an intellectual disability often only include and limit to **2 the role of** parents, overlooking **the role of** siblings and sibling dynamics as a long-term social support system.

With the awareness about Intellectual and Developmental Disabilities among the population, Early Intervention services receive the utmost importance to early detect the symptoms and to provide appropriate interventions and therapies. This has subsequently **2 led to the** solitary focus on parental role and parenting as the stakeholders in the lives of individuals with intellectual disabilities. This focus is also reflected in the research studies conducted to understand parents of children/adult **5 children with Intellectual** and developmental disabilities.

The availability, accessibility, and attainability of resources and information regarding the lives of adult persons with Intellectual and developmental disabilities, the intervention

services in adulthood, therapies, employment opportunities, and their support systems are scarce and insufficient. The information and awareness on sibling roles in long-term caregiving and or social support systems are scarce, calling attention to the need and significance of social support to siblings with Intellectual and Developmental disabilities. An obligation exists to understand the shift to collateral kinship in rehabilitative efforts, intervention services, and social support systems for people with intellectual disability. 6

A sibling of a person with an intellectual disability is understood as an individual with an ascribed status as a sibling, along with the theoretical assumption and inferences that one's experiences shape life outcomes. The cause of their state of being is not only attributed to their physiological and psychological preoccupation as a sibling, 1 but also the experiences that shape their dispositions. Thus, the study explored one disposition: personality traits, state of being, and loneliness. The personality profile and state of loneliness are significant to understand the sibling as an individual and in the context of caregiving.

Therefore, a requirement is evident to develop intervention systems and information to keep the siblings of people with intellectual disabilities better informed about themselves and their siblings.

Although important revelations were acquired, the study has several limitations.

The primary limitation is the limited number of participants (N=30). The greatest challenge was to find and reach out to adult siblings of people with intellectual disabilities. There were difficulties in the ethical codes of non-disclosure of personal information/contact information among special institutions and Non-Governmental Organisations. All participants were part of online sibling support communities, which potentially influenced the results of this study. However, the platform assisted in reaching out to siblings across different regions in India. A significant limitation is the vast age range of the subjects; the age range distribution of the sample is between 18 and 51 years. The life experiences of different developmental stages influence personality traits. The research study and implications could be precisely analysed among young adulthood, middle adulthood, and late adulthood

separately.

As the research focuses on the condition of intellectual disability with varying comorbidities, the inclusion of siblings of people diagnosed with Autism was to demonstrate that the challenges are different for intellectual disability (Adaptive Functioning) and Autism (Social communication and Interaction). Future research could explore the conditions individually. The limitations are further found in exploring the sociodemographics of the population. The demographics **3 of differences in** rural-urban India, marital status, joint family or nuclear family setup, and the moderating **role of the** chronological age of the siblings could be explored.

The study included English-proficient individuals. Future research could incorporate Indian languages.

1 The influence of levels of intellectual disability on the personality profile and loneliness of siblings, and **the role of** psychological and physical comorbidities, could be explored using sociodemographics.

The details of **2 the level of** intellectual disability of the sibling were obtained from a self-report questionnaire **based on the** data available to them at that given point in time. Thus, the validity of self-report on **the level of** intellectual disability of the sibling is ambiguous.

The inadequate body of literature, similar to the current research, emphasises the required future research interest in siblings **3 of people with intellectual disability.**

Due to restricted N, the statistical findings are to be interpreted with caution such constraints may reduce statistical power, potentially yielding less stable parameter estimates and limiting the external validity **16 of the results** . Consequently, these results should **3 be viewed as** exploratory.

The limitations of the present research can be adapted **for future research** among the population of siblings **of people with intellectual disability.**

The most significant finding **1 of the study** is the emphasis on the need to study specific populations who are often overlooked, which has broader implications on self-care, Intervention-rehabilitation services, and support systems.

Novel solutions also arise from dedicating research focus and discoveries to distinctive and often neglected issues and challenges, which are subsequently addressed through the implementation of both psychological and community-based strategies.

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