

THINKING STYLE AS PREDICTOR OF ATTITUDE TOWARDS CHILDREN WITH DISABILITIES AMONG PARENTS OF CHILDREN WITH DISABILITIES

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ABSTRACT

Parental thinking styles may be relevant to understanding attitudes toward children with disabilities. This study examined whether parental thinking style was positively associated with and statistically predicted parental attitudes toward children with disabilities. A quantitative, cross-sectional correlational design was used with 200 parents. The study specified the Rational-Experiential Inventory-40 and the Parental Attitudes Toward Children with Handicaps scale as its measures. Pearson correlation and simple linear regression were conducted using the supplied thinking-style and parental-attitude variables. Results indicated a significant positive association between the scores, $r(198) = .994, p < .001$. The regression model was significant, $F(1, 198) = 16,608.36, p < .001$, accounting for 98.8% of the variance in parental-attitude scores, $R^2 = .988$. The predictor had a significant positive coefficient, $B = 0.695, \beta = .994, p < .001$. These findings supported the hypothesized positive association and statistical prediction but did not establish a causal effect. Interpretation requires confirmation that the variable labelled parenting style represents the intended thinking-style construct and that both measures were scored independently and correctly. Limitations include reliance on self-report, potential shared method variance, and the absence of separate rational and experiential predictors. Future research should examine these dimensions separately, incorporate multiple assessment methods, and use longitudinal or experimental designs. The findings identify a relationship warranting further investigation before conclusions are drawn about interventions intended to improve parental attitudes through changes in thinking style.

I. INTRODUCTION

Parents' attitudes toward children with disabilities constitute an important aspect of the social environment in which acceptance and inclusion develop. Recent research has identified relationships between parental attitudes and children's acceptance of peers with disabilities, suggesting that family perspectives are relevant to the development of inclusive social responses (Santilli et al., 2022; Sümer Dodur & Yüzbaşıoğlu, 2025). Research on parental experiences of schooling further demonstrates that perceptions of inclusion encompass children's participation, friendships, school support, and emotional well-being, with some parents reporting concerns about exclusion and inadequate recognition of their children's needs (McKinlay et al., 2022; Sharma et al., 2022). Therefore, understanding the psychological factors associated with parental attitudes may contribute to a more comprehensive

explanation of how families approach disability and inclusion. Parents raising children with disabilities may experience psychological demands that provide an important context for their disability-related perceptions. Research has linked everyday caregiving-related stressors with psychological distress and documented substantial anxiety and depressive symptoms among mothers of children with neurodevelopmental and genetic conditions (Broll et al., 2025; Neoh et al., 2022). Studies involving parents of autistic children and children with cerebral palsy have also described connections among caregiving experiences, affiliate stigma, resilience, stress, and quality of life, demonstrating that parental experiences vary across personal and social circumstances (Chu et al., 2023; Salleh et al., 2022). Consequently, examining parental attitudes requires consideration of the emotional and social conditions within which parents interpret their children's disabilities.

Parents' interpretations of difficult experiences represent a relevant psychological dimension of adaptation to childhood disability. Research on stigma has shown that perceived social rejection and internalised negative beliefs are associated with parents' experiences of affiliate stigma, depression, and reduced quality of life (Čolić et al., 2022; Serchuk et al., 2021). Complementary research has demonstrated the prospective relevance of psychological flexibility to parental stress and depression and established a validated measure of this construct among parents of autistic children, providing support for examining how parents relate to challenging thoughts and feelings (Feldman et al., 2023; Li et al., 2026). Thus, parental thinking style may offer a related but distinct perspective on the cognitive processes involved in interpreting disability-related experiences. Parental thinking style can be conceptualised through differences in preferences for rational and experiential information processing. Recent validation studies of the Rational–Experiential Inventory have supported the assessment of analytical and intuitive thinking preferences across different linguistic and cultural settings, while also emphasising the importance of evaluating the instrument's structure within each population (Aguiar & Tabak, 2026; Purić & Jokić, 2023). Further research has distinguished multiple dimensions of intuitive–analytic thinking and demonstrated that the relationship between analytical processing and performance varies according to the thinking disposition and task being examined (Hongdizi et al., 2023; Newton et al., 2024). Therefore, investigating rational and experiential thinking separately may provide a more informative account of parental attitudes than assuming that one general thinking preference explains all disability-related judgments.

Individual differences in information processing may be relevant to the ways people evaluate emotionally significant information and make decisions. Studies of vaccination behaviour and judgments about medical and food technologies have identified associations involving cognitive reflection, experiential thinking, need for cognition, attitudes, and evaluations of risks and benefits (Maroiu et al., 2022; Sloboda & Lagerkvist, 2021). Research in other demanding contexts has also linked thinking styles with motivation among hospital employees and with coping and post-traumatic stress symptoms among adults exposed to political violence, although these findings concern populations distinct from parents of children with disabilities (Kiroğlu Arslan, 2022; Zvi & Cohen-Louck, 2023). These findings provide an indirect theoretical rationale for investigating parental thinking style while leaving its specific relationship with disability-related attitudes open to empirical examination. Social support and opportunities for meaningful interaction are important contextual factors in understanding parental responses to childhood disability. Research involving families of children with additional needs has associated perceived social support with life satisfaction and resilience, while qualitative evidence from Karachi has identified both the value of supportive relationships and the difficulties created by inadequate family assistance (Lakhani et al., 2024; Sardohan Yildirim et al., 2025). Pakistani qualitative studies have additionally described positive social and emotional experiences following participation in dialogic literary gatherings and regional differences in caregivers' access to support, healthcare, and financial resources (Khaqan et al., 2025; Ullah et al., 2026). Consequently, parental thinking preferences should be examined within the interpersonal and material circumstances that may influence how disability-related information is interpreted.

Parents' attitudes toward inclusion vary according to their experiences of disability and their perceptions of educational provision. Studies involving intellectual disability and autism have found differences in inclusion attitudes associated with contact, having a child with a disability, and beliefs concerning disability-related stigma, indicating that parental perspectives are not uniform (Alshemari et al., 2023; Wilson et al., 2025). Research in Jordan and Türkiye has further documented parental concerns about bullying, teacher preparedness, guidance services, and educational arrangements, showing that support for inclusion can coexist with reservations about its

implementation (Benson et al., 2024; Yazicioğlu & Sümer Dodur, 2025). Therefore, investigating parental thinking style may help explore variation in attitudes while recognising that parents' judgments also reflect their experiences of available services. The Pakistani context highlights the importance of examining parental perspectives alongside knowledge, service accessibility, and family pressures. Research in Rawalpindi identified gaps in parental knowledge about childhood hearing loss, while a study including Pakistan, Malawi, and Uganda documented how local beliefs, limited awareness, and service constraints complicated the early identification and referral of children with disabilities (Lynch et al., 2024; Mazlan & Dar, 2024). Additional Pakistani research has described challenges involving understanding inclusive education and strengthening parent–teacher relationships, together with psychological difficulties experienced by parents caring for autistic children (Nadeem et al., 2024; Virani & Ali, 2022). Accordingly, examining parental thinking style in Pakistan may contribute to understanding individual differences within a broader context of informational, educational, and psychological needs.

Affiliate stigma represents a further consideration when examining how parents understand and respond to disability. Research involving caregivers of children with attention-deficit/hyperactivity disorder and autism has linked affiliate stigma with selected child emotional outcomes, child characteristics, and family circumstances, demonstrating that stigma involves interacting personal and social factors (Chang et al., 2021; Ma et al., 2023). Studies involving intellectual disability and other childhood disabilities have additionally associated greater affiliate stigma with hopelessness and lower life satisfaction and documented caregivers' experiences of blame, withdrawal, coping, and resistance to discriminatory beliefs (Kasimoglu & Arkan, 2021; Luetke Lanfer et al., 2025). These findings suggest that research on parental attitudes should consider how parents interpret social messages about disability without assuming that their thinking preferences alone determine acceptance or stigma. Investigating parental thinking style may contribute to research seeking to understand psychological processes relevant to family support. Randomised trials of Acceptance and Commitment Therapy have reported improvements in selected parental outcomes, including psychological flexibility, stress, depression, and family distress, providing evidence that parents' relationships with difficult thoughts and emotions can be addressed through intervention (Marino et al., 2021; Maughan et al., 2024). Smaller studies in Japan and Pakistan have also reported promising findings for values-based behaviour and integrated parenting support, although their designs and sample sizes limit conclusions about broader effectiveness (Chaudhry et al., 2023; Uramoto et al., 2023). Building on this wider attention to parental psychological processes, the present study will examine whether rational and experiential thinking styles are associated with parental attitudes toward children with disabilities in Pakistan.

Theoretical Framework

Cognitive-experiential self-theory provides the principal framework for understanding how parental thinking styles may relate to attitudes toward children with disabilities. This theory proposes that individuals process information through two interacting systems: a rational system involving deliberate reasoning and logical evaluation, and an experiential system involving intuitive judgments, emotions, and learning from experience (Epstein, 2003; Epstein, 2014). Related dual-process accounts distinguish relatively automatic processing from more deliberate reasoning, providing a theoretical basis for examining how parents interpret disability-related information through different cognitive processes (Evans & Stanovich, 2013; Sloman, 1996). Consequently, the present study treats rational and experiential thinking as distinct dimensions that may contribute to parental attitudes through different patterns of information processing. The multicomponent conception of attitudes complements this framework by explaining how beliefs, feelings, and behavioural tendencies contribute to evaluations of children with disabilities. Research differentiating the components of attitudes demonstrates that cognitive evaluations and emotional responses can be distinguishable, supporting the examination of parental attitudes as broader evaluations rather than expressions of knowledge alone (Breckler, 1984; Crites et al., 1994). Furthermore, theories of evaluative processing explain how learned associations and deliberate consideration of information can contribute to judgments, suggesting that both experiential responses and rational evaluation may be relevant to disability-related attitudes (Gawronski & Bodenhausen, 2006; Smith & DeCoster, 2000). Together, these perspectives support a theoretical model in which rational and experiential thinking are examined as separate predictors of parental attitudes without assuming that either style necessarily produces more favourable evaluations.

Rationale of the study

Examining parental thinking styles may extend understanding of the psychological processes associated with attitudes toward children with disabilities. Recent studies have identified relationships between parental attitudes toward inclusion and factors such as disability-related knowledge, beliefs about inclusion, and the particular disability being considered, demonstrating the importance of how parents understand and evaluate disability (Hadjikakou et al., 2025; Kárpáti & Miklósi, 2026). Related evidence connects cognitive appraisal with psychological adjustment among parents of children with developmental disabilities and identifies distinguishable cognitive and emotional dimensions in parental attitudes toward inclusive education, providing complementary reasons to investigate information processing in this context (Suzukida & Yamane, 2023; Xu et al., 2022). Therefore, directly assessing rational and experiential thinking alongside parental attitudes would help establish whether these thinking dimensions explain meaningful variation in the proposed study population. The study also has practical relevance for understanding parental perspectives within demanding and culturally situated caregiving environments. Research with families in Pakistan has documented associations between parental stress and available support, while qualitative findings illustrate how caregiving experiences are interpreted through family responsibilities, faith, and culturally embedded expectations (Ali et al., 2023; Rabbani & Nawaz, 2026). Local intervention research has produced outcome-specific findings, including improved caregiver quality of life in a randomized trial and no significant association between intervention participation and reduced parental stress in a separate cross-sectional study, indicating that different parental outcomes require direct examination (Hamdani et al., 2021; Ali & Fatima Haider, 2024). Accordingly, identifying associations between thinking styles and parental attitudes could inform subsequent research on parent communication and support, with intervention implications requiring further evaluation.

Objectives

1. To examine the relationship between parental rational thinking style and attitudes toward children with disabilities.
2. To examine the effect of parental thinking style on attitudes toward children with disabilities.

Hypotheses

1. H1: Parental thinking style was significant positively associated with attitudes toward children with disabilities.
2. H2: Parental thinking style would have significant positive effect on attitudes toward children with disabilities.

II. METHOD

Research Design

The study employed a quantitative, cross-sectional correlational design to examine the relationship between parental thinking style and attitudes toward children with disabilities. Parental thinking style served as the predictor variable, while parental attitude constituted the outcome variable. Pearson correlation and simple linear regression were used to examine the association and statistical prediction between the measured scores. The design permitted the investigation of relationships but did not establish causality.

Participants

The population comprised parents of children with diagnosed disabilities, including physical, intellectual, neurodevelopmental, and sensory disabilities. The sample consisted of 200 participants, comprising 100 mothers and 100 fathers, with different ages, educational backgrounds, and rural and urban residences. Participants were recruited through disability support organizations, special education institutions, and rehabilitation clinics using purposive sampling with equal quotas for mothers and fathers. Recruitment focused on parents who met the specified eligibility requirements. The sample of 200 participants was evaluated through a sensitivity analysis for the planned statistical tests. With 200 complete and independent observations, a two-sided significance level of .05, and

statistical power of .80, the correlation analysis could detect an association of approximately $|r| = .20$. This supported the investigation of relationships of that magnitude or larger, although smaller associations could have remained undetected. The justification applied to the complete sample and did not establish equivalent power for separate analyses of mothers and fathers. Participants were eligible if they were adult mothers or fathers of children aged 0–18 years with a diagnosed disability, had completed at least high school education, and had been involved in caregiving for at least one year. They were also required to understand the questionnaire language and voluntarily agree to participate. Individuals who did not meet these criteria or were unwilling or unable to complete the questionnaires were excluded. These requirements defined the study population while limiting the applicability of the findings to parents with lower educational attainment.

Measures

[I] Parental Thinking Style: Rational–Experiential Inventory–40: The Rational–Experiential Inventory–40 assessed parents' self-reported rational and experiential thinking tendencies. The instrument contained 40 items, with responses recorded on a five-point scale. The alpha Cronbach reported was 0.80. **[II]** The Parental Attitudes Toward Children with Handicaps scale (PATCH): It was developed by Rosenbaum, Armstrong, and King in 1987, evaluates the emotional, behavioral, and cognitive responses of parents to raising children with disabilities. The scale consists of 30 items, rated on a 5-point Likert scale (from 1 = Strongly Disagree to 5 = Strongly Agree). It includes three subscales: Affective Dimension, Behavioral Intent, and Cognitive Component, which measure emotional reactions, caregiving intentions, and beliefs about their child's disability. This scale typically has a Cronbach's alpha around 0.85, indicating good internal consistency, and scores range from 30 to 150 based on the sum of the items.

Procedure

Participants were approached through disability support organizations, educational institutions, and clinics. Before data collection, they received information about the study's purpose, voluntary participation, confidentiality, and withdrawal arrangements, and informed consent was obtained. Participants completed the demographic questions, REI-40, and PATCH either in person or online according to their preference. Responses were coded and stored securely to protect participants' identities. According to the study procedure, ethical approval was obtained from the relevant institutional review board before data collection. Participants were informed that participation was voluntary and that they could withdraw without adverse consequences. Confidentiality was maintained by removing identifying information from the analytical data and restricting access to research records. Findings were reported collectively to protect individual participants' privacy. Data were analysed using the Statistical Package for the Social Sciences. Pearson's product–moment correlation examined the association between the recorded thinking-style and parental-attitude scores, and simple linear regression assessed whether thinking-style scores statistically predicted parental-attitude scores. Both analyses included 200 participants; regression used listwise exclusion of missing observations, while correlation used pairwise exclusion. Statistical significance was evaluated at .05, and the results were reported using correlation coefficients, unstandardized and standardized regression coefficients, test statistics, probability values, and explained variance.

III. RESULTS

Pearson's correlation and simple linear regression analyses were conducted to examine the association between parenting-style scores and parental attitudes toward children with disabilities. Both analyses included 200 participants.

Table I: Correlation Between Parenting Style and Parental Attitudes Toward Children with Disabilities (n=200)

Variables	<i>M</i>	<i>SD</i>	1	2
Parental thinking Style	108.38	43.06	--	
Parental attitudes toward children with disabilities	52.49	30.11	.994***	--

*** $p < .001$.

A Pearson correlation indicated a statistically significant, strong positive association between parenting-style scores and parental-attitude scores, $r(198) = .994$, $p < .001$. Higher parenting-style scores were associated with higher parental-attitude scores (see Table 1).

Table II: Simple Linear Regression Predicting Parental Attitudes Toward Children with Disabilities (n=200)

Predictor	B	SE B	β	t	p
Parental thinking Style	-22.856	0.629	-	-36.34	< .001
Parental attitudes toward children with disabilities	0.695	0.005	0.994	128.87	< .001

Note. $N = 200$. $R^2 = .988$; adjusted $R^2 = .988$; $F(1, 198) = 16,608.36$, $p < .001$. B = unstandardized regression coefficient; $SE B$ = standard error of the coefficient; β = standardized regression coefficient.

A simple linear regression examined whether parenting-style scores predicted parental-attitude scores. The overall model was statistically significant, $F(1, 198) = 16,608.36$, $p < .001$, accounting for 98.8% of the variance in parental attitudes, $R^2 = .988$, adjusted $R^2 = .988$. Parenting style was a significant positive predictor, $B = 0.695$, $SE = 0.005$, $\beta = .994$, $t(198) = 128.87$, $p < .001$. Each one-unit increase in parenting-style scores was associated with an estimated 0.695-unit increase in parental-attitude scores.

IV.DISCUSSION

The present study examined the relationship between parental thinking style and attitudes toward children with disabilities among 200 participants. Correlation and regression analyses indicated a significant positive relationship between the measured variables. The following discussion considers each hypothesis, compares the results with relevant literature, and explains possible reasons for the findings while recognizing the study's measurement and design limitations. The first hypothesis proposed that parental thinking style would be significantly positively associated with attitudes toward children with disabilities. The results supported the proposed direction, revealing a very strong positive correlation, $r(198) = .994$, $p < .001$. This finding indicates that participants with higher scores on the measured thinking-style variable also tended to obtain higher parental-attitude scores. Assuming that higher PATCH scores represent more favourable attitudes, the result suggests that thinking-style scores are associated with more favourable evaluations of children with disabilities. Three studies provide related support for the broader proposition that parental understanding and experience are relevant to disability-related attitudes. Gómez-Marí et al. (2022) found that parents of children with autism had greater autism knowledge and more favourable attitudes toward inclusion than the comparison groups, while Alshemari et al. (2023) found particularly positive inclusion attitudes among parents who had contact with, or had children with, intellectual disabilities. Wilson et al. (2025) also identified differences between parents with and without an autistic child in autism-related knowledge, attitudes, and aspects of inclusion beliefs, highlighting the importance of parental experience and disability-specific perceptions. These findings offer contextual support for examining parental cognitive perspectives, although none directly replicates the relationship between the REI-40 and PATCH.

Three contrasting findings challenge a broad interpretation that particular thinking tendencies necessarily produce more favourable social evaluations. Liang et al. (2021) found that participants characterized by experiential thinking made more altruistic decisions than those characterized by rational thinking, whereas Kvam et al. (2022) demonstrated that rational information-gathering strategies could produce polarized judgments under particular decision goals. De keersmaecker and Schmid (2023) further found that selective exposure among participants with negative intergroup orientations predicted less favourable subsequent diversity beliefs, while the corresponding bias among positively oriented participants did not predict more favourable beliefs. These results constitute qualifications to a universally positive interpretation of thinking processes, rather than direct contradictions of the present parental-attitude correlation. Several possible explanations may account for the positive association observed in the present study. Parents' interpretation of information about disability may be connected with their expectations, emotional responses, and evaluations of children's abilities. Caregiving experience, educational background, and contact with professionals could also relate to both questionnaire scores, although the supplied analysis did not examine these explanations. Consequently, these mechanisms remain possibilities for further

investigation, and the current findings cannot determine whether rational thinking, experiential thinking, or another feature of the recorded score accounts for the association.

The second hypothesis proposed that parental thinking style would have a significant positive effect on attitudes toward children with disabilities. The regression model was statistically significant, $F(1, 198) = 16,608.36$, $p < .001$, and the predictor had a positive coefficient, $B = 0.695$, $\beta = .994$, $p < .001$. The model accounted for 98.8% of the observed variance in parental-attitude scores, indicating a very strong statistical relationship within this sample. Accordingly, the findings support the proposed positive predictive relationship, but the cross-sectional analysis does not establish the causal effect stated in H_2 . Three studies provide indirect support for the possibility that cognitive engagement can contribute to changes in social evaluations. Brienza et al. (2021) found that wise reasoning was associated with more positive intergroup evaluations and that a wise-reasoning intervention reduced attitude polarization, while Santos et al. (2023) demonstrated that directing attention to other people's thoughts and metacognitions could improve attitudes toward minority groups. Kim and Lim (2022) additionally found that first-person narratives increased the perceived social presence of a stigmatized group member, with social presence playing a role in favourable intergroup outcomes. Together, these findings make cognitive and perspective-taking explanations plausible, although they do not establish that increasing the present thinking-style score would improve parents' PATCH scores.

Three methodological contributions qualify the causal interpretation of the regression result, rather than providing empirical contradictions of H_2 . Rohrer (2024) explains that observational associations require explicit causal assumptions, while Rohrer and Murayama (2023) show that even longitudinal statistical relationships do not automatically identify causal effects. Podsakoff et al. (2024) further document how shared measurement methods can distort observed relationships, making measurement quality particularly relevant when two self-report scores share almost all their variance. These considerations limit the strength of the causal conclusion without demonstrating that the observed positive association is false. The unusually large explained variance requires verification before substantive reasons are assigned to the predictive result. In a simple regression with one predictor and an intercept, R^2 equals the squared Pearson correlation, meaning that the regression and correlation results describe the same underlying relationship rather than independent confirmations of the hypotheses. The value of $R^2 = .988$ therefore makes it especially important to check that the predictor and outcome were calculated from separate, correctly scored items and that the variable labelled "ParentingStyle" represents the intended construct. Once these checks are completed, the findings can be interpreted as evidence of a strong sample association, with causal explanations requiring additional research.

Limitations and Future Research Recommendations

The study's reliance on self-report questionnaires may have introduced social desirability bias and differences in participants' interpretations of the items. Future research should combine questionnaires with structured interviews, behavioural observations, or decision-making tasks to strengthen assessment. The cross-sectional design also prevented conclusions about temporal order and causality; therefore, longitudinal studies and appropriately designed experiments are recommended to investigate whether changes in thinking styles precede changes in parental attitudes. Additionally, purposive recruitment and the minimum education requirement restricted generalizability, highlighting the need for broader recruitment across community settings and educational backgrounds. The analysis used a single thinking-style variable without distinguishing rational and experiential dimensions, limiting interpretation of their respective contributions. Future studies should verify variable labels and scoring procedures and examine these dimensions separately. The exceptionally high correlation and explained variance also warrant checks for overlapping items, calculation errors, and shared measurement influences, followed by replication in independent samples. Finally, the regression did not account for potential confounders such as parental education, caregiving experience, disability characteristics, and access to support; future research should evaluate these factors through theoretically justified statistical models.

Implications

The findings suggest that parental thinking processes warrant consideration in research on attitudes toward children with disabilities. For psychologists, educators, and rehabilitation professionals, this provides a reason to explore how parents understand information, evaluate expectations, and describe their experiences during family consultations.

Clear information, opportunities to ask questions, and respectful discussion of parental perspectives may provide useful components for future intervention research. However, the present study does not establish that changing thinking style improves attitudes or that one thinking approach is preferable to another. Its principal implication is therefore to guide further assessment and hypothesis development, with practical interventions requiring verified measurement and direct evaluation of their effectiveness.

V. CONCLUSION

The study identified a significant positive association between the measured parental thinking-style score and attitudes toward children with disabilities among 200 parents. Simple linear regression also demonstrated a significant positive predictive relationship, with the model explaining 98.8% of the variance in parental-attitude scores. These findings support H_1 and the statistical prediction proposed in H_2 , although the cross-sectional design does not establish a causal effect. The exceptionally strong relationship requires verification of the variables and scoring procedures before substantive conclusions are finalized. Overall, the findings indicate a relationship worthy of further investigation, particularly through separate assessment of rational and experiential thinking.

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