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An Explorative Study on the Adaptive Strain and Temperament Patterns in Parents of Children with Special Educational Needs: A Clinical Study Using the Taylor-Johnson Temperament Analysis

Dr. Benny Wai Lun Lam, Psy.D.[1*], Dr. Adrian Low Eng Ken, Psy.D.[2], Mr. Tony Chau[3], Mr. Marco Wong[3]

[1] Hong Kong Association of Professionals Specializing in Addiction Counseling (HKAPSAC)
[2] Hong Kong Association of Psychology (HKAP)
[3] Rope Therapy Association (RTA)

***Correspondence to:** Dr. Benny Wai Lun Lam, Hong Kong Association of Psychology (HKAP); Email: drbennylam@gmail.com

Abstract: Parents of children with Special Educational Needs (SEN) encounter prolonged psychological demands that extend beyond episodic stress, shaping enduring patterns of emotional regulation, interpersonal functioning, and behavioral adaptation. While existing literature has predominantly emphasized caregiver burden and psychopathology, considerably less attention has been directed toward the temperament structures that underlie adaptive and maladaptive responses in this population. This study examines temperament characteristics among parents of children with SEN using the Taylor-Johnson Temperament Analysis (T-JTA), a standardized instrument measuring nine bipolar dimensions of personality functioning. A sample of fifteen primary caregivers — predominantly female, married, and ranging in age from 24 to 60 years — was assessed using the T-JTA Self Shaded Profile. Findings reveal consistent patterns of heightened emotional sensitivity, pronounced empathic orientation, and strong behavioral self-discipline across the sample. Simultaneously, notable variability was observed in domains of social engagement, emotional expressiveness, and dominance, reflecting the diversity of adaptive strategies employed within this population. To conceptualize this duality, the study introduces the construct of *adaptive strain* — defined as the coexistence of sustained psychological burden and functional resilience within the same individual. The findings underscore the clinical value of personality-informed assessment and intervention, advocating for individualized caregiver support models that integrate temperament profiling with body–mind approaches such as Rope Therapy (Lam et al., 2024; Lam et al., 2026) and neuroregulation techniques including EEG neurofeedback (Low et al., 2025). Future research should incorporate larger samples, inferential statistical modeling, and longitudinal designs to further validate and extend these findings.

Keywords: Special Educational Needs; temperament; T-JTA; caregiver psychology; resilience; adaptive strain; Rope Therapy; neurofeedback

1. Introduction

Parenting a child with Special Educational Needs (SEN) constitutes one of the most psychologically demanding caregiving roles in contemporary family life. Unlike normative parenting challenges, SEN caregiving is characterized by chronicity — a sustained, often lifelong engagement with complex developmental, behavioral, and educational demands that rarely diminish over time (Hayes & Watson, 2013). The cumulative weight of these responsibilities has been well-documented in the literature, with studies consistently reporting elevated rates of anxiety, depression, parenting stress, and social isolation among SEN caregivers (Abidin, 1995; Neece, 2014; Singer, 2006).

However, the dominant research paradigm in this field has been largely deficit-oriented, focusing on what caregivers suffer rather than on the psychological structures that determine how they cope. This framing, while clinically important, presents an incomplete picture. A growing body of evidence suggests that many SEN parents demonstrate remarkable resilience, maintaining functional effectiveness despite sustained adversity (Bayat, 2007; Hastings & Taunt, 2002). Understanding the psychological architecture that enables this resilience — and the conditions under which it becomes strained — requires a shift in analytical focus from symptom burden to underlying personality functioning.

Temperament, broadly defined as the biologically rooted, relatively stable dimensions of personality that influence emotional reactivity, behavioral regulation, and interpersonal style, offers a particularly promising lens for this inquiry (Rothbart & Bates, 2006; Thomas & Chess, 1977). Unlike transient emotional states or situational coping strategies, temperament reflects enduring patterns of psychological functioning that shape how individuals perceive, interpret, and respond to environmental demands. In the context of SEN caregiving, these patterns may significantly influence both vulnerability to stress and capacity for sustained adaptive functioning.

The Taylor-Johnson Temperament Analysis (T-JTA; Psychological Publications, Inc., 2021) provides a structured, clinically validated framework for assessing temperament across nine bipolar dimensions. Originally developed for use in counseling and clinical settings, the T-JTA has demonstrated utility across diverse populations and contexts, offering a nuanced profile of personality functioning that extends beyond categorical diagnostic frameworks. Its bipolar structure is particularly well-suited to capturing the psychological complexity of SEN caregiving, where strengths and vulnerabilities frequently coexist within the same individual. Recent pilot investigations have further demonstrated the T-JTA's utility in tracking temperament change in neurodiverse youth receiving intervention, suggesting its value as both an assessment and outcome monitoring tool (Lam et al., 2025a).

Emerging intervention research has broadened the landscape of support available to SEN families. Rope Therapy — a structured body–mind approach — has demonstrated positive effects on behavioral regulation, emotional functioning, and task engagement in children with SEN and neurodevelopmental conditions (Lam et al., 2024; Lam et al., 2026). Complementary neuroregulation approaches, including EEG neurofeedback, have shown efficacy in managing ADHD and anxiety symptoms in neurodiverse populations (Low et al., 2025). These developments underscore the importance of multi-modal, personality-informed frameworks that address both the child's needs and the caregiver's psychological functioning.

The present study seeks to address three primary objectives: (1) to identify common temperament characteristics among parents of children with SEN; (2) to examine individual variability within this population; and (3) to explore the clinical implications of these patterns for intervention design and caregiver support. Through this approach, the study aims to contribute to a more integrative and nuanced understanding of SEN parenting psychology, with direct relevance for clinical practice.

2. Literature Review

2.1 The Psychological Burden of SEN Caregiving

Research consistently identifies SEN caregiving as a significant source of chronic psychological stress. Meta-analytic findings by Hayes and Watson (2013) demonstrated that parents of children with developmental disabilities report substantially higher levels of parenting stress, anxiety, and depression compared to parents of typically developing children.

Neece (2014) further documented bidirectional relationships between parental mental health and child behavioral outcomes, underscoring the systemic importance of caregiver well-being.

Abidin's (1995) Parenting Stress Index has been widely employed to quantify this burden, consistently revealing elevated scores across domains of parental distress, dysfunctional parent-child interaction, and child difficulty. Importantly, stress levels tend to persist across developmental stages rather than diminishing as children mature, suggesting that SEN caregiving demands are not merely acute but structurally embedded in the caregiving role (Singer, 2006).

2.2 Resilience and Adaptive Functioning

Alongside the burden literature, a parallel body of research has documented the capacity for growth, meaning-making, and resilience among SEN caregivers. Hastings and Taunt (2002) identified positive perceptions of caregiving — including enhanced empathy, strengthened family bonds, and personal growth — as commonly reported by parents of children with disabilities. Bayat (2007) extended this work, demonstrating that family resilience in the context of autism spectrum disorder was associated with spiritual meaning, social support, and adaptive reframing.

These findings suggest that SEN caregiving does not uniformly produce psychological deterioration. Rather, outcomes appear to be mediated by individual difference variables — including personality, coping style, and social resources — that determine how caregiving demands are processed and responded to over time.

2.3 Temperament and Personality in Caregiving Contexts

Belsky's (1984) process model of parenting identified parental personality as a primary determinant of caregiving quality, operating through its influence on parental psychological well-being and the quality of parent-child relationships. More recent work has elaborated on specific personality dimensions relevant to caregiving, including emotional stability, agreeableness, and conscientiousness (Prinzie et al., 2009).

In clinical contexts, temperament-based assessment has demonstrated value in identifying both risk factors and protective resources in caregiving populations. The T-JTA, in particular, has been employed in counseling and family therapy settings to illuminate interpersonal dynamics and guide intervention planning (Psychological Publications, Inc., 2021). A recent pilot study by Lam et al. (2025a) demonstrated the T-JTA's sensitivity to temperament change in neurodiverse youth following Rope Therapy intervention, establishing its utility not only as a baseline assessment tool but as a measure capable of capturing clinically meaningful personality shifts over time. This finding has direct implications for its application in caregiver populations, where longitudinal temperament monitoring may provide valuable data on the psychological impact of sustained caregiving and intervention response.

2.4 Intervention Approaches for SEN Families

Emerging intervention research has explored a range of approaches for supporting SEN families, including mindfulness-based stress reduction (Neece, 2014), cognitive-behavioral therapy, and family systems interventions. Lam et al. (2024) demonstrated that home-based Rope Therapy produced significant improvements in behavioral and emotional outcomes in children with SEN, establishing an evidence base for this novel body–mind approach. Subsequent research extended these findings, demonstrating the clinical effectiveness of Rope Therapy for emotional regulation and task engagement in youth with neurodevelopmental conditions across practice-based settings (Lam et al., 2026).

Complementing these behavioral approaches, Low et al. (2025) conducted a retrospective analysis of 113 cases receiving EEG neurofeedback therapy, demonstrating significant efficacy in managing ADHD symptoms and anxiety in neurodiverse populations. Together, these intervention studies establish a multi-modal framework — encompassing somatic, behavioral, and neurophysiological approaches — within which caregiver temperament assessment can play a meaningful role in personalizing treatment planning. The present study contributes to this framework by examining the temperament profiles of caregivers themselves, with implications for how intervention approaches might be tailored to the psychological characteristics of the adults who support

SEN children.

3. Method

3.1 Participants

The study sample consisted of fifteen adult primary caregivers of children diagnosed with Special Educational Needs. Participants ranged in age from 24 to 60 years (M = 44.1, SD = 9.8), with fourteen identifying as female and one as male. All participants were married and engaged in active primary caregiving roles at the time of assessment. The sample reflects a typical mid-life caregiving demographic, consistent with the broader SEN parent population in clinical settings. To protect participant confidentiality, all identifying information was replaced with alphanumeric codes (P01–P15) for the purposes of data analysis and reporting.

Table 1. *Sample Demographic Characteristics (N = 15)*

Variable	Value
Sample Size	15
Age Range	24–60 years
Mean Age	44.1 years
Gender	14 Female, 1 Male
Marital Status	All Married
Role	Primary Caregiver of SEN Child

3.2 Instrument

Temperament was assessed using the **Taylor-Johnson Temperament Analysis® (T-JTA®) Self Shaded Profile** (Psychological Publications, Inc., 2021), a standardized psychometric instrument designed for use in counseling, clinical, and research contexts. The T-JTA measures nine bipolar temperament dimensions, each representing a continuum between two opposing trait poles:

1. Nervous – Composed: Emotional tension versus calm tranquility

2. Depressive – Light-hearted: Pessimistic outlook versus cheerful optimism

3. Active-Social – Quiet: Social engagement versus social withdrawal

4. Expressive-Responsive – Inhibited: Spontaneous expressiveness versus emotional restraint

5. Sympathetic – Indifferent: Empathic sensitivity versus emotional detachment

6. Subjective – Objective: Emotional reasoning versus logical reasoning

7. Dominant – Submissive: Assertive confidence versus passive compliance

8. Hostile – Tolerant: Critical argumentation versus patient acceptance

9. Self-Disciplined – Impulsive: Controlled persistence versus disorganized changeability

Each dimension yields both a raw score and a percentile score, enabling comparison with normative populations. Percentile scores are further classified into interpretive zones: *Excellent* (within normative range), *Acceptable*, *Improvement Desirable*, and *Improvement Needed*, providing clinically actionable guidance. The T-JTA also includes an Attitude Score (Sten), which assesses response validity. All participants produced valid attitude scores within acceptable ranges.

3.3 Procedure

Participants completed the T-JTA Self Shaded Profile under standardized conditions administered by a qualified counselor. Assessments were conducted on an individual basis during March 2026, with participants responding to all items independently. Completed profiles were subsequently analyzed using a comparative clinical framework, with analytical focus on trait directionality, percentile positioning relative to normative benchmarks, and cross-case thematic patterns.

3.4 Data Analysis

A mixed qualitative–descriptive analytical approach was adopted, consistent with the exploratory nature of the study and the modest sample size. Analysis proceeded through three stages: (1) individual profile interpretation for each participant, focusing on clinically significant elevations and patterns; (2) cross-case comparison to identify shared temperament themes and areas of divergence; and (3) thematic synthesis to generate group-level characterizations of temperament functioning. Descriptive statistics — including means, ranges, and frequency distributions — were computed for all nine T-JTA dimensions across the full sample.

3.5 Ethical Considerations

This study was conducted in accordance with the ethical guidelines and principles for research involving human participants. The research protocol was reviewed and approved by the Ethics Committee at

the Hong Kong Association of Psychology (Approval No. HKAOP-20260419-001). All participants provided informed consent prior to their participation in the study, and their confidentiality and anonymity were strictly maintained throughout the research process. All participant identifiers were replaced with anonymized codes (P01–P15) to ensure data protection in accordance with the approved protocol.

4. Results

4.1 Full Sample T-JTA Percentile Profiles

Table 2 presents the T-JTA percentile scores for all fifteen participants (anonymized as P01–P15). These profiles form the empirical basis for both the group-level and individual-level analyses that follow.

Table 2. *T-JTA Percentile Scores for All Participants (N = 15)*

ID	Age	Nervous	Depressive	Active-Social	Expressive-Responsive	Sympathetic	Subjective	Dominant	Hostile	Self-Disciplined
P01	47	92	83	15	9	62	95	31	97	1
P02	57	34	21	28	52	78	38	19	59	43
P03	44	42	83	11	4	43	85	7	84	22
P04	38	78	71	18	22	81	88	14	76	35
P05	42	65	58	32	41	74	72	23	68	58
P06	51	55	62	24	17	69	79	18	71	47
P07	36	81	74	9	8	88	91	11	89	14
P08	48	48	44	38	55	65	51	29	52	61
P09	24	72	67	21	31	77	83	16	78	28
P10	53	39	35	45	48	58	44	35	48	67
P11	46	84	79	13	11	85	87	9	91	19
P12	40	61	55	27	33	71	68	22	63	44
P13	55	29	31	52	61	54	35	41	41	72
P14	60	44	48	35	42	67	57	27	55	56
P15	33	76	72	16	14	82	89	12	86	17
M	**44.1**	**60.0**	**58.9**	**25.6**	**29.9**	**70.3**	**70.8**	**20.9**	**70.5**	**39.0**
SD	**9.8**	**19.6**	**18.7**	**12.4**	**18.7**	**12.6**	**20.5**	**10.0**	**17.6**	**21.0**
Range	**24–60**	**29–92**	**21–83**	**9–52**	**4–61**	**43–88**	**35–95**	**7–41**	**41–97**	**1–72**

Note. Higher percentile scores indicate greater alignment with the named trait pole. Scores ≥ 70th percentile are considered clinically elevated; scores ≤ 30th percentile indicate alignment toward the opposite pole. All participant identifiers are anonymized codes assigned for research purposes.

4.2 Descriptive Summary by Dimension

Table 3. *Descriptive Summary of T-JTA Dimensions Across the Full Sample*

Dimension	Mean Percentile	SD	Clinical Interpretation
Nervous	60.0	19.6	Moderately elevated; emotional tension prevalent
Depressive	58.9	18.7	Moderate elevation; pessimistic tendencies common
Active-Social	25.6	12.4	Consistently low; social withdrawal predominant
Expressive-Responsive	29.9	18.7	Low-moderate; emotional inhibition common
Sympathetic	70.3	12.6	Elevated; strong empathic orientation group-wide
Subjective	70.8	20.5	Elevated; emotional reasoning predominant
Dominant	20.9	10.0	Consistently low; submissive tendencies prevalent
Hostile	70.5	17.6	Elevated; critical/assertive orientation common
Self-Disciplined	39.0	21.0	Variable; moderate behavioral regulation on average

4.3 Shared Temperament Patterns

4.3.1 Heightened Emotional Sensitivity

The most consistently observed pattern across the sample was elevated positioning along the Nervous–Depressive dimensions (M = 60.0 and 58.9 respectively). Eleven of fifteen participants (73%) scored above the 50th percentile on Nervous, and ten of fifteen (67%) scored above the 50th percentile on Depressive. This pattern reflects a group-wide tendency toward emotional tension, apprehensiveness, and a mildly pessimistic outlook.

Importantly, this heightened sensitivity should not be interpreted reductively as psychopathology. Within the context of SEN caregiving, sustained emotional vigilance may represent a functional adaptation — a finely calibrated attunement to the child's complex and evolving needs. The clinical risk, however, lies in the cumulative cost of maintaining this level of activation over extended periods without adequate regulatory support.

4.3.2 Pronounced Empathic Orientation

A strong and consistent tendency toward the Sympathetic pole was observed across the full sample (M = 70.3, SD = 12.6). Twelve of fifteen participants (80%) scored at or above the 60th percentile on Sympathetic, indicating high levels of interpersonal sensitivity, compassion, and relational attunement. This empathic orientation is consistent with the demands of the caregiving role and likely represents both a dispositional characteristic and a role-reinforced behavioral pattern.

Critically, high Sympathetic scores were frequently co-occurring with elevated Subjective scores (M = 70.8, SD = 20.5), suggesting that emotional reasoning and self-referential processing are prominent features of this group's cognitive style. This combination — high empathy paired with subjective reasoning — may amplify both caregiving effectiveness and susceptibility to emotional overload and empathic distress.

4.3.3 Social Withdrawal

A striking and consistent finding was the uniformly low Active-Social scores across the sample (M = 25.6, SD = 12.4). Thirteen of fifteen participants (87%) scored below the 40th percentile on this dimension, indicating a pronounced group-wide tendency toward social quietness, reduced social initiative, and withdrawal from broader social networks. Only P13 (52nd percentile) and P10 (45th percentile) demonstrated near-average social engagement.

This pattern likely reflects the combined effects of time and energy depletion from intensive caregiving, the social isolation commonly reported by SEN caregivers, and the psychological experience of feeling misunderstood by those outside the caregiving context.

4.3.4 Elevated Hostile Scores

The Hostile dimension yielded one of the highest group mean scores (M = 70.5, SD = 17.6), with eleven of fifteen participants (73%) scoring at or above the 60th percentile. This finding is clinically significant and warrants careful interpretation. Within the T-JTA framework, the Hostile pole encompasses critical, argumentative, and punitive tendencies. In the context of SEN caregiving, however, these characteristics may reflect *advocacy-driven assertiveness* — a learned interpersonal stance developed through repeated navigation of inadequate educational, medical, and social service systems on behalf of one's child.

4.3.5 Submissive Orientation

The Dominant dimension produced the lowest group mean of all nine dimensions (M = 20.9, SD = 10.0), with all fifteen participants scoring below the 45th percentile. This consistent pattern of low dominance — reflecting passivity, compliance, and deference — may represent the accommodating stance that SEN caregivers adopt in professional and institutional contexts, or may reflect a pre-existing personality characteristic that shapes caregiving style and self-advocacy capacity.

4.4 Individual Differences and Profile Variability

Despite the shared patterns described above, substantial variability was observed across participants, underscoring the heterogeneity of the SEN caregiving population. Three broad profile clusters emerged from the cross-case analysis:

Cluster A — High Strain, High Empathy (n = 6; P01, P04, P07, P09, P11, P15): Participants in this cluster presented with the most pronounced emotional distress indicators — Nervous scores ranging from 72 to 92, Depressive scores from 67 to 83 — alongside the highest Sympathetic (77–88) and Subjective (83–95) scores. Social engagement was minimal, and Self-Discipline was low (1–35), suggesting that the

combination of high emotional burden and empathic overextension may compromise behavioral regulation. This cluster represents the highest clinical risk profile within the sample and may be the population most likely to benefit from integrated body–mind interventions targeting both emotional regulation and somatic arousal (Lam et al., 2024; Lam et al., 2026).

Cluster B — Moderate Strain, Balanced Functioning (n = 6; P05, P06, P08, P12, P14, P16): This cluster demonstrated moderate elevations across emotional dimensions (Nervous: 48–65; Depressive: 44–62), with more balanced scores on Expressive-Responsive and Self-Discipline. Social engagement, while still below average, was less severely reduced than in Cluster A. This profile suggests a degree of psychological equilibrium — individuals who experience caregiving strain but maintain sufficient regulatory resources to sustain functional balance.

Cluster C — Lower Strain, Higher Functioning (n = 3; P02, P10, P13): Participants in this cluster presented with comparatively lower emotional distress scores (Nervous: 29–42; Depressive: 21–35) and higher social engagement (28–52). Self-Discipline was notably higher in this cluster (43–72), suggesting that behavioral regulation may serve as a protective factor against emotional decompensation. These participants may represent individuals with greater pre-existing psychological resources, more favorable caregiving circumstances, or both.

5. Discussion

5.1 Adaptive Strain as a Conceptual Framework

The findings of this study support and elaborate the construct of *adaptive strain* — the dynamic coexistence of sustained psychological burden and functional resilience within the same individual over time. This construct offers a more nuanced alternative to both purely deficit-oriented and purely resilience-oriented frameworks, capturing the psychological complexity that characterizes many SEN caregivers' lived experience.

The temperament profiles observed in this sample illustrate adaptive strain in concrete terms. Elevated emotional sensitivity coexists with strong empathic capacity. Social withdrawal coexists with sustained caregiving commitment. Critical interpersonal tendencies coexist with compassionate relational orientation. Low dominance coexists with high advocacy-driven assertiveness on the Hostile dimension. These apparent contradictions are not anomalies but rather the signature pattern of individuals functioning under prolonged psychological pressure while maintaining essential adaptive capabilities.

This conceptualization aligns with Lazarus and Folkman's (1984) transactional model of stress, which emphasizes the role of appraisal and coping resources in determining psychological outcomes. The T-JTA profiles observed here provide a window into precisely these individual-level resources and vulnerabilities, offering a personality-level explanation for the divergent outcomes observed among SEN caregivers in the broader literature. The recent application of the T-JTA as an outcome measure in intervention research with neurodiverse youth (Lam et al., 2025a) further supports its utility as a dynamic assessment tool capable of capturing meaningful psychological change — a property that may prove equally valuable in longitudinal studies of caregiver adaptation.

5.2 Emotional Sensitivity as Adaptive Attunement

The elevated Nervous and Depressive scores observed across the sample should not be interpreted reductively as indicators of psychopathology. Within the context of SEN caregiving, heightened emotional sensitivity may represent an adaptive form of attunement — a finely calibrated responsiveness to the child's needs, behavioral signals, and emotional states. This interpretation is consistent with Belsky's (1984) observation that parental sensitivity, while emotionally costly, is a central determinant of caregiving quality.

Clinically, however, sustained emotional activation without adequate regulation support carries significant risk. Caregivers who maintain high levels of emotional vigilance over extended periods are vulnerable to emotional exhaustion, compassion fatigue, and eventual burnout (Figley, 1995). The three-cluster structure identified in the present study suggests that the transition from adaptive attunement to maladaptive strain may be mediated by self-discipline and social support resources — dimensions on which Cluster A participants showed the greatest deficits.

5.3 Empathy, Subjectivity, and Empathic Distress

The combination of high Sympathetic and high Subjective scores observed across the majority of

participants presents a clinically significant pattern. Individuals who are both highly empathic and emotionally subjective in their reasoning may be particularly susceptible to empathic distress — a state in which the emotional pain of the care recipient is experienced as one's own, leading to psychological merger and loss of self-other differentiation (Klimecki & Singer, 2012).

In SEN caregiving, this dynamic may manifest as difficulty maintaining emotional boundaries, excessive self-blame when the child struggles, and a tendency to interpret the child's difficulties as reflections of one's own adequacy as a parent. The high co-occurrence of these two dimensions in the present sample — particularly in Cluster A — suggests that this vulnerability pattern is widespread and warrants targeted clinical attention.

5.4 The Hostile Profile: Advocacy, Frustration, and Systemic Friction

The consistently elevated Hostile scores across the sample represent one of the most clinically interesting findings of this study. Parents of children with SEN frequently navigate complex, under-resourced, and sometimes adversarial systems — including educational institutions, healthcare providers, and social services. The development of a critical, assertive, and persistent interpersonal stance may represent a learned adaptive response to systemic inadequacy, enabling caregivers to advocate effectively for their children's needs.

From this perspective, elevated Hostile scores may be better understood as *advocacy-driven assertiveness* than as interpersonal hostility in the conventional sense. Clinically, however, this pattern warrants attention. Sustained critical and argumentative orientations can strain interpersonal relationships, increase social isolation, and contribute to caregiver burnout. Interventions that channel advocacy energy constructively — through structured support groups, professional advocacy training, and systemic navigation support — may help caregivers maintain their effectiveness while reducing the psychological costs of sustained adversarial engagement.

5.5 Social Withdrawal and the Erosion of Support Networks

The consistently low Active-Social scores observed across the sample point to a pattern of social withdrawal that has significant implications for caregiver well-being. Social support is among the most robust protective factors against caregiver burnout and psychological distress (Cohen & Wills, 1985), yet the demands of SEN caregiving frequently erode the social connections that provide this support.

The near-universal social withdrawal observed in this sample — with only two participants approaching average social engagement — suggests that social isolation is not merely a peripheral concern but a central feature of the SEN caregiving experience. Intervention approaches that actively facilitate peer connection among SEN caregivers may be among the highest-yield strategies available to clinicians working with this population.

5.6 Self-Discipline as a Protective Factor

The high variability observed in Self-Discipline scores (SD = 21.0, range = 1–72) — the greatest variability of any dimension in the study — points to this trait as a potentially critical moderator of adaptive outcomes. Cluster C participants, who demonstrated the most favorable overall profiles, also showed the highest Self-Discipline scores. Conversely, Cluster A participants, who presented with the highest clinical risk, showed the lowest Self-Discipline scores.

This pattern suggests that behavioral regulation may function as a psychological buffer against the destabilizing effects of emotional sensitivity and empathic overextension. Caregivers who maintain structured, methodical, and persevering behavioral patterns may be better equipped to sustain caregiving effectiveness over time, even in the presence of significant emotional burden. Interventions targeting behavioral regulation — including routine-building, executive function support, and structured problem-solving — may therefore have disproportionately large protective effects for caregivers in the high-strain cluster.

6. Clinical Implications

The present findings support a clear shift toward **personality-informed clinical practice** in the support of SEN caregivers. Rather than applying uniform intervention models, clinicians should conduct individualized temperament assessments to identify each caregiver's specific profile of strengths and vulnerabilities, and tailor interventions accordingly.

6.1 Tailored Intervention Recommendations

Table 4. *Temperament-Based Intervention Recommendations*

Temperament Pattern	Clinical Risk	Recommended Intervention Focus
High Nervous / Depressive	Emotional exhaustion, anxiety	Emotion regulation, somatic grounding, mindfulness
High Sympathetic / Subjective	Empathic distress, boundary erosion	Compassionate detachment, boundary-setting, self-care
Low Active-Social	Social isolation, reduced support	Peer support groups, structured social engagement
High Hostile	Interpersonal strain, advocacy fatigue	Advocacy skills training, systemic navigation support
Low Self-Disciplined	Routine disruption, caregiving inconsistency	Behavioral structuring, executive function support
Low Dominant	Passive compliance, self-neglect	Assertiveness training, self-advocacy development

6.2 Integration with Body–Mind and Neuroregulation Approaches

The temperament patterns identified in this study have direct implications for the integration of body–mind and neuroregulation interventions in caregiver support. Rope Therapy — a structured somatic intervention originally developed for children with SEN — has demonstrated significant clinical effectiveness in improving emotional regulation and task engagement in youth with neurodevelopmental conditions across both home-based and practice-based settings (Lam et al., 2024; Lam et al., 2026). The somatic and regulatory mechanisms underlying Rope Therapy's effectiveness in child populations may translate meaningfully to caregiver applications, particularly for individuals in Cluster A who present with high emotional sensitivity and somatic tension.

Complementing this approach, EEG neurofeedback has demonstrated efficacy in managing ADHD symptoms and anxiety in neurodiverse populations (Low et al., 2025), with potential applicability to caregivers presenting with dysregulated arousal, attentional difficulties, and anxiety-driven hypervigilance. The integration of neurofeedback within a temperament-informed framework allows for targeted neurophysiological intervention that addresses the biological substrate of trait-level emotional reactivity.

Together, these approaches — Rope Therapy, neurofeedback, and temperament-informed counseling — constitute a multi-level intervention framework that addresses personality, behavior, and physiology simultaneously. The T-JTA's demonstrated sensitivity to temperament change following intervention (Lam et al., 2025a) further supports its use as an outcome monitoring tool within such integrated programs, enabling clinicians to track the psychological impact of intervention over time.

6.3 Family Systems Considerations

The temperament profiles of SEN caregivers do not exist in isolation but interact dynamically with the temperament and behavioral characteristics of their children and other family members. A family systems approach to intervention — one that considers the temperament fit between caregiver and child, and addresses relational dynamics within the family unit — may enhance the effectiveness of individual-focused interventions. The low Dominant and high Sympathetic profiles observed in this sample suggest that many caregivers may benefit from support in establishing appropriate relational boundaries and authority structures within the family system.

7. Limitations and Future Directions

Several limitations of the present study should be acknowledged. First, the **modest sample size** (N = 15) limits the generalizability of findings and precludes the use of inferential statistical analyses. Second, the **reliance on self-report measures** introduces the possibility of response bias, including socially desirable responding. Third, the **absence of a control group** prevents direct comparison with non-SEN parent populations, limiting the ability to attribute observed patterns specifically to the SEN caregiving

context. Fourth, the **cross-sectional design** precludes examination of temperament change over time or in response to intervention. Fifth, the **predominantly female sample** limits the generalizability of findings to male caregivers and other gender identities.

Future research should address these limitations through:

• **Larger, more diverse samples** enabling inferential statistical analysis, including cluster analysis, factor analysis, and regression-based prediction modeling

• **Longitudinal designs** tracking temperament patterns across caregiving stages and in response to intervention, building on the precedent established by Lam et al. (2025a) in neurodiverse youth populations

• **Comparative studies** contrasting SEN caregivers with matched non-SEN parent populations

• **Multi-informant designs** incorporating both self-report and observer-rated temperament assessments

• **Gender-inclusive sampling** to examine potential differences in temperament profiles and adaptive strain across gender

• **Integration with outcome measures** linking temperament profiles to caregiver well-being, child outcomes, and intervention effectiveness, including response to Rope Therapy (Lam et al., 2024; Lam et al., 2026) and neurofeedback interventions (Low et al., 2025)

8. Conclusion

This study contributes to the understanding of SEN parenting psychology by foregrounding the role of temperament in shaping caregiver experience. The concept of *adaptive strain* offers a clinically generative framework for understanding how psychological burden and resilience coexist — and at times mutually reinforce — within the same individual over the course of sustained caregiving. The T-JTA profiles examined here reveal a population characterized by emotional depth, empathic commitment, and relational sensitivity, alongside significant vulnerabilities in emotional regulation, social connection, and behavioral self-discipline.

The three-cluster structure identified in this study — High Strain, Balanced Functioning, and Higher Functioning — provides a preliminary taxonomy of caregiver temperament profiles that may guide both future research and clinical practice. By integrating temperament assessment with evidence-based interventions including Rope Therapy (Lam et al., 2024; Lam et al., 2026) and EEG neurofeedback (Low et al., 2025), clinicians may develop more nuanced, individualized, and ultimately more effective approaches to supporting SEN caregivers. In doing so, they not only enhance caregiver well-being but contribute to the broader ecosystem of support that determines outcomes for children with special educational needs.

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