

When Home Is Loud: Strategies of Coping with Sensory Overload in Adolescents

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ABSTRACT

Objective: This study aimed to explore the coping strategies employed by adolescents when experiencing sensory overload in noisy and overstimulating home environments.

Methods and Materials: A qualitative design was adopted to capture adolescents' lived experiences. Twenty-five adolescents aged 13–18 years from Greece were recruited through purposive sampling. Semi-structured interviews were conducted, focusing on experiences of sensory overload, its emotional and behavioral consequences, and the strategies used to manage these challenges. Interviews continued until theoretical saturation was reached, transcribed verbatim, and analyzed using thematic analysis with NVivo 14 software. Reflexivity and peer debriefing were applied to enhance trustworthiness.

Findings: Three overarching themes emerged: emotional regulation strategies, environmental and behavioral adjustments, and social and support-oriented strategies. Emotional regulation strategies included self-soothing, withdrawal, mindfulness, and cognitive reframing. Environmental and behavioral adjustments encompassed control of the physical environment, engagement in alternative activities, use of technology, and structured routines to reduce overstimulation. Social and support-oriented strategies highlighted the importance of peer validation, family understanding, professional guidance, and community engagement. While some adolescents adopted adaptive strategies such as mindfulness and family communication, others relied on avoidance or social withdrawal.

Conclusion: The study underscores that adolescents employ a wide spectrum of coping mechanisms, ranging from personal regulation techniques to reliance on family and community support. Findings highlight the need for interventions that integrate individual coping skill development with family- and community-level supports.

Keywords: Adolescence; Sensory overload; Coping strategies; Family dynamics

1. Introduction

Adolescence is a critical developmental period marked by rapid physical, cognitive, and socio-emotional transitions. While this stage offers opportunities for independence and identity formation, it also introduces heightened vulnerability to stressors within the home environment. One such stressor is sensory overload, a condition characterized by overwhelming sensory input that exceeds the individual's capacity for processing and regulation (Scheydt et al., 2017). Although sensory overload has long been discussed in the context of psychiatric and neurodevelopmental conditions, its impact on adolescents' everyday functioning within family settings is increasingly recognized as a pressing area of inquiry (Hammud et al., 2025; Hulle et al., 2017). Understanding how adolescents navigate noisy, overstimulating home contexts is essential for developing interventions that safeguard mental health, academic achievement, and social adjustment.

Sensory overload occurs when the intensity or multiplicity of sensory stimuli—such as sound, light, or tactile input—creates an overwhelming state of discomfort or distress (Scheydt et al., 2017). Adolescents are particularly vulnerable to these experiences due to developmental neuroplasticity and the ongoing maturation of executive and emotional regulation systems (Hammud et al., 2025). Previous research demonstrates that sensory modulation difficulties are often associated with hyperarousability and internalizing symptoms in this age group (Hammud et al., 2025). Moreover, parental transmission studies highlight that heightened sensory over-responsivity may run within families, suggesting a biopsychosocial dimension to adolescents' coping patterns (Hulle et al., 2017). These findings underscore that coping with sensory overload is not merely a matter of individual resilience, but is shaped by broader developmental, familial, and contextual influences.

The family context plays a decisive role in shaping how adolescents experience and regulate sensory overload. Studies show that the quality of parent–child communication is strongly linked to adolescents' emotional security and self-esteem (Zhang et al., 2019). Conversely, when parental roles are strained by chronic stress or overload, adolescents may encounter fewer resources to buffer the negative impacts of sensory overstimulation (Hart et al., 2019; Rodríguez et al., 2022). For instance, research on families of adolescents with autism spectrum disorder has demonstrated that parental well-being moderates the extent to which

environmental stressors translate into parental overload and conflict (Rodríguez et al., 2022). Similarly, caregivers of adolescents with chronic illness report higher role overload when health-related demands accumulate, further illustrating the interconnectedness of parental stress and adolescents' coping resources (Hart et al., 2019).

Scholars have emphasized that parents' own sensory processing sensitivity can influence parenting practices, including their responsiveness to adolescents' needs (Goldberg & Scharf, 2020). Parents with heightened sensory sensitivity may be more attuned to environmental triggers, but they may also struggle to regulate their own responses, potentially amplifying household tensions. This dynamic suggests that interventions for adolescents must consider parent–child systems holistically (Asmussen, 2020; Pine et al., 2024).

A growing body of work has investigated interventions designed to mitigate sensory overload and related stress in young people. Sensory integrative interventions, for example, have been found to support improvements in motor, cognitive, and social functioning among children with attentional difficulties (Barakat et al., 2023). Adolescents and adults alike report that sensory-based interventions, such as occupational therapy approaches, can enhance their ability to engage meaningfully with daily activities (Miller et al., 2023). Importantly, wearable devices such as ball vests have been explored as aids for adolescents with neuropsychiatric disorders, with mixed feedback from adolescents, parents, and teachers regarding comfort, stigma, and effectiveness (Breivik et al., 2019).

Beyond sensory-specific approaches, broader psychosocial interventions have been trialed. Cognitive-behavioral programs targeting autistic adolescents, for instance, have demonstrated promise in improving self-awareness and adaptive coping skills (Oshima et al., 2023). Similarly, psychosocial interventions delivered by non-specialists in resource-limited settings have been shown to enhance emotion regulation and reduce behavioral difficulties (Cherewick et al., 2023). These findings suggest that effective interventions can take diverse forms, ranging from structured therapy to community-delivered programs, yet the role of family and parental involvement remains consistently emphasized (Pine et al., 2024; Scripps et al., 2025).

Parental involvement is increasingly recognized as a cornerstone of adolescent-focused interventions. Evidence from systematic reviews indicates that interventions which engage parents directly tend to yield more sustainable

outcomes in adolescent well-being (Bhengu et al., 2025; Scripps et al., 2025). For example, meta-analyses of psychological interventions show that active parental participation enhances adolescents' motivation to apply coping strategies (Pine et al., 2024). In contrast, when parental engagement is superficial, intervention outcomes are often limited (Shaw et al., 2021).

Digital and remote approaches have also gained attention. Online, single-session parenting programs have demonstrated potential in reducing adolescent risk for depression and anxiety, though their scalability and cultural adaptability require further testing (Cardamone-Breen et al., 2018). Remote training interventions, such as those teaching parents behavioral reinforcement strategies, have been validated by adolescents and parents alike as socially acceptable and practically feasible (Dumproff & Dowdy, 2023). Collectively, these studies illustrate that interventions addressing adolescent coping cannot be divorced from the family ecosystem, especially when dealing with sensory overload in home environments.

Adolescents themselves employ a variety of coping strategies to navigate sensory overload. Some rely on withdrawal and avoidance, while others engage in cognitive reframing or mindfulness-based techniques. Research has shown that sensory processing sensitivity interacts with the quality of peer and parental relationships to predict externalizing behavior (Fischer et al., 2022). These findings highlight the relational dimension of coping, whereby adolescents' strategies are not only individual but embedded in social and familial contexts. Moreover, qualitative studies of adolescents' lived experiences reveal that sensory-based interventions are often perceived differently depending on adolescents' sense of autonomy, agency, and identity (Miller et al., 2023).

In contexts where adolescents face multiple layers of social stress—such as stigma related to autism (Trew, 2024), or negative external responses from communities (Throuvala et al., 2021)—coping strategies must be understood as adaptive responses to broader systemic pressures. Importantly, when adolescents experience external invalidation or marginalization, sensory overload may compound feelings of difference and social isolation, increasing the risk of mental health difficulties (Berry et al., 2021).

Sensory overload does not exist in isolation; it interacts with psychosocial, educational, and cultural dimensions of adolescent life. For example, adolescents with heightened sensitivity may be more vulnerable to the challenges posed

by digital environments, where constant notifications, bright screens, and social media interactions can intensify overstimulation (Throuvala et al., 2021). Parents and caregivers often struggle to negotiate boundaries around diet, activity, and screen use, illustrating the difficulties of aligning parental authority with adolescent autonomy (Shaw et al., 2021). In some contexts, adolescents report that sensory difficulties are trivialized or misunderstood by adults, which undermines opportunities for collaborative coping (Berry et al., 2025).

Research from diverse cultural settings underscores the significance of contextual factors. In low- and middle-income countries, for instance, resource limitations often mean that psychosocial interventions must be delivered by non-specialists, highlighting the importance of scalable, context-sensitive approaches (Cherewick et al., 2023). Similarly, studies in South Africa have pointed out how adolescent parents struggle with the dual demands of caregiving and self-regulation in environments of heightened stress (Berry et al., 2025). These insights illustrate that sensory overload cannot be detached from socio-economic and cultural dynamics.

Despite the growing evidence base, significant gaps remain. While many interventions highlight the importance of parental involvement, fewer studies directly explore adolescents' own coping strategies for sensory overload in everyday home contexts. Moreover, much of the literature has focused on clinical populations, particularly those with autism or neuropsychiatric diagnoses (Barakat et al., 2023; Oshima et al., 2023). Less is known about how neurotypical adolescents, particularly those living in environments characterized by noise, crowding, or familial stress, negotiate the challenges of overstimulation.

Furthermore, there is a need to understand coping strategies from adolescents' perspectives, using qualitative methodologies that foreground their subjective experiences. Prior research demonstrates that adolescents' voices offer critical insights into the social validation and acceptability of interventions (Dumproff & Dowdy, 2023). Similarly, studies on family well-being suggest that overlooking adolescents' perspectives risks misaligning interventions with their actual needs (Reigstad et al., 2022; Trew, 2024).

In addition, while parental overload and stress are increasingly studied (Hart et al., 2019; Rodríguez et al., 2022), fewer works examine how these dynamics intersect with adolescents' sensory coping within the household. Emerging evidence that highly sensitive parents may shape their children's coping styles (Goldberg & Scharf, 2020)

reinforces the importance of considering bidirectional influences.

Against this backdrop, the present study seeks to explore adolescents' lived experiences of sensory overload within their homes and the strategies they employ to cope with these challenges.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a qualitative research design to explore strategies adolescents use to cope with sensory overload in their home environments. A purposive sampling approach was used to ensure the inclusion of participants who had direct experience with sensory overload in everyday life. The final sample consisted of 25 adolescents residing in Greece, aged between 13 and 18 years. Participants were recruited through schools, community centers, and youth organizations, with attention given to capturing diversity in terms of gender, socioeconomic background, and urban versus rural residence. Recruitment continued until theoretical saturation was achieved, meaning no new themes or insights emerged from subsequent interviews.

2.2. Measures

Data were collected through semi-structured, face-to-face interviews. This method was chosen for its flexibility in allowing participants to describe their personal experiences while providing researchers with the opportunity to probe and clarify emerging ideas. An interview guide was developed, focusing on participants' experiences of sensory overload within their home environments, the emotional and behavioral consequences they encountered, and the strategies they employed to manage or reduce these experiences. Each interview lasted between 45 and 70

minutes, depending on the depth of responses. All interviews were conducted in Greek, recorded with participants' consent, and subsequently transcribed verbatim.

2.3. Data Analysis

The data analysis process followed a thematic analysis framework. Transcripts were first read multiple times to ensure familiarity with the content. Initial coding was conducted to identify meaningful units of text that reflected participants' coping strategies and experiences with sensory overload. Codes were then organized into broader categories and themes, reflecting patterns across the dataset. To facilitate systematic management and coding of the qualitative data, NVivo software version 14 was used. The research team engaged in constant comparison throughout the analysis to refine themes and ensure coherence. Reflexivity was maintained during the process to reduce researcher bias, and peer debriefing sessions were conducted to enhance the credibility of findings.

3. Findings and Results

The study included 25 adolescents from Greece, ranging in age from 13 to 18 years (mean age = 15.6). Of the participants, 13 identified as female (52%) and 12 as male (48%). In terms of residence, 15 participants (60%) lived in urban areas such as Athens and Thessaloniki, while 10 participants (40%) were from rural or semi-rural regions. Regarding family composition, 17 adolescents (68%) lived in households with both parents, whereas 8 (32%) resided in single-parent families. The majority of participants, 14 (56%), reported having two or more siblings, which they often associated with higher household noise levels, while 11 (44%) had one or no siblings. Additionally, 9 participants (36%) self-identified as highly sensitive to sound since early childhood, compared with 16 participants (64%) who described their sensitivity as emerging during adolescence.

Table 1

Thematic Table

Category (Theme)	Subcategory (Subtheme)	Concepts (Open Codes)
1. Emotional Regulation Strategies	Self-Soothing Practices	Deep breathing, Listening to calming music, Positive self-talk, Visualization of safe place
	Withdrawal and Retreat	Isolating in bedroom, Using noise-cancelling headphones, Turning off lights, Avoiding interaction
	Emotional Expression	Crying as release, Writing in a journal, Talking to a sibling, Expressing frustration verbally
	Mindfulness and Relaxation	Practicing meditation, Focusing on present moment, Muscle relaxation, Counting techniques, Prayer

	Cognitive Reframing	Reinterpreting noise as temporary, Minimizing importance, Focusing on positive aspects of home life
2. Environmental and Behavioral Adjustments	Control of Physical Environment	Closing doors, Rearranging furniture, Using curtains, Adjusting lighting, Creating quiet zones
	Engagement in Alternative Activities	Reading books, Drawing or painting, Playing digital games, Engaging in sports, Walking outside
	Sensory Substitution	Listening to white noise, Playing with fidget tools, Using scented candles, Holding soft textures
	Family Communication	Asking parents for quiet time, Negotiating shared spaces, Explaining sensitivity to siblings
	Technology-Based Solutions	Listening to music on earphones, Using sleep apps, Watching calming videos, Guided relaxation online, Limiting screen brightness
3. Social and Support-Oriented Strategies	Structured Routines	Scheduling rest times, Creating homework timetable, Meal consistency, Nighttime rituals
	Peer Support	Talking to friends, Sharing experiences online, Receiving reassurance, Group study sessions
	Professional Guidance	Talking to school counselor, Therapy sessions, Teacher support during stressful periods
	Family Understanding and Support	Parents lowering TV volume, Siblings respecting space, Family encouraging breaks
	Social Withdrawal	Declining social invitations, Reducing family interaction, Avoiding crowded gatherings
	Community Engagement	Participation in youth centers, Religious groups, Sports clubs, Volunteer activities

Theme 1: Emotional Regulation Strategies

Self-soothing practices were frequently employed by adolescents to regain a sense of calm when home environments became overwhelming. Participants described simple but effective tactics such as deep breathing, listening to calming music, or engaging in visualization. One participant noted, *“When everything feels too loud, I put on my headphones and breathe slowly until my body relaxes.”*

Withdrawal and retreat emerged as another recurrent strategy. Many participants preferred to isolate themselves in their bedrooms, switch off lights, or use noise-cancelling headphones to create distance from overstimulation. As one adolescent expressed, *“The only way I can handle it is to hide in my room and shut the door, even if it makes me look antisocial.”*

In contrast, some adolescents coped through **emotional expression**, externalizing their feelings in different ways. Several described crying, journaling, or speaking to siblings as helpful outlets. One participant explained, *“I write in my notebook when I feel I will explode—it’s like putting the noise on paper.”*

Mindfulness and relaxation techniques were also highlighted. Adolescents reported practicing meditation, focusing on the present moment, and using muscle relaxation techniques. A participant described, *“I just sit on the floor, close my eyes, and try to notice my breathing instead of the shouting.”*

Finally, **cognitive reframing** appeared in narratives, where participants actively tried to reinterpret noise and chaos as temporary or less significant. One interviewee said,

“I tell myself this is just normal family noise and it will pass, so I shouldn’t let it ruin my day.”

Theme 2: Environmental and Behavioral Adjustments

A central strategy involved **control of the physical environment**, where adolescents manipulated their surroundings to reduce sensory input. They spoke about closing doors, adjusting lighting, or creating designated quiet zones. One participant explained, *“I move my desk near the window because it feels calmer when I can see outside.”*

Another approach was **engagement in alternative activities**, where adolescents redirected attention by reading, drawing, gaming, or walking outdoors. These activities functioned both as distractions and as positive outlets. One adolescent reflected, *“When my house is too loud, I go for a walk; the street feels more peaceful than my living room.”*

Sensory substitution strategies were also employed, such as using white noise, scented candles, or tactile objects like stress balls. One participant shared, *“I play rain sounds on my phone so I don’t hear my parents arguing.”*

Family communication was a subtheme where adolescents described negotiating with family members. Some asked for quiet study times, while others explained their sensitivity to siblings. A participant recalled, *“I told my brother that I get really anxious when he blasts his music, and sometimes he turns it down for me.”*

Technology facilitated coping in the form of **technology-based solutions**. Adolescents used music apps, guided relaxation videos, and phone features like reduced screen

brightness. One interviewee commented, *"I use a sleep app every night because it helps block out the TV noise from the living room."*

Finally, the creation of **structured routines** provided stability amidst unpredictability. Adolescents described scheduled rest, homework timetables, and consistent bedtime rituals. As one explained, *"When I stick to my routine, even the chaos feels less disturbing because I know what comes next."*

Theme 3: Social and Support-Oriented Strategies

Peer support was commonly mentioned as a way to process experiences. Adolescents found relief in discussing their struggles with friends or sharing similar experiences online. One participant explained, *"When I tell my best friend about the noise at home, she says she feels the same with her family, and that makes me feel less weird."*

A smaller number turned to **professional guidance**, seeking help from school counselors, teachers, or therapists. These adolescents emphasized that professional support helped them learn coping skills. One noted, *"Talking to the counselor taught me tricks like focusing on one sense instead of everything at once."*

Family understanding and support emerged as critical. Adolescents appreciated when parents or siblings adjusted behaviors—such as lowering TV volume or respecting personal space. A participant said, *"My mom asks me if I need quiet when she cooks, and it makes me feel understood."*

Conversely, **social withdrawal** also appeared as a coping mechanism. Some adolescents intentionally reduced family interaction or declined social invitations when overstimulated. One remarked, *"I just don't join family dinners when the table is too crowded—it's easier to stay in my room."*

Finally, **community engagement** provided another outlet. Participation in youth centers, sports, or religious groups gave adolescents respite from noisy households. One participant reflected, *"At the youth club, it's busy but in a fun way, not like the stressful noise at home."*

4. Discussion and Conclusion

The findings of this study provide rich insights into how adolescents navigate sensory overload within the home environment. Three broad themes emerged: emotional regulation strategies, environmental and behavioral adjustments, and social and support-oriented strategies. These categories encompassed a variety of subthemes,

ranging from self-soothing and cognitive reframing to structured routines and community engagement. Adolescents demonstrated both adaptive and avoidant strategies, with coping shaped not only by individual capacities but also by family dynamics, parental responsiveness, and broader social contexts.

The first major theme indicated that adolescents frequently rely on emotional regulation strategies such as self-soothing, withdrawal, mindfulness, and cognitive reframing to manage overwhelming environments. These findings highlight adolescents' attempts to exert internal control in contexts where external environments remain noisy and overstimulating. Prior literature underscores the centrality of sensory modulation to emotional well-being during adolescence, especially in youth experiencing heightened hyperarousability (Hammud et al., 2025). Similarly, parent-offspring transmission studies have shown that internalizing symptoms and sensory over-responsivity often co-occur within families, suggesting that adolescents may model regulatory styles observed in their parents (Hulle et al., 2017).

The reliance on emotional strategies also echoes research demonstrating that adolescents with strong sensory processing sensitivity experience more intense emotional reactivity, but may benefit from reframing and mindfulness techniques (Fischer et al., 2022). Qualitative evidence suggests that adolescents perceive self-directed interventions as empowering when they maintain agency in deciding how and when to use them (Miller et al., 2023). Our findings thus align with these studies in demonstrating that emotional regulation represents both an immediate response to sensory overload and a pathway toward longer-term adaptation.

The second theme revealed that adolescents often turn to practical environmental and behavioral modifications to create tolerable conditions at home. Strategies such as closing doors, adjusting lighting, or using noise-cancelling headphones illustrate the desire to actively control environmental triggers. These findings resonate with occupational therapy approaches that emphasize sensory integrative interventions, which have been shown to enhance motor, cognitive, and social outcomes for children with attentional or regulatory challenges (Barakat et al., 2023). Furthermore, research into wearable devices such as weighted or ball vests has similarly indicated that adolescents and parents recognize environmental tools as central to daily coping with sensory issues (Breivik et al., 2019).

Engagement in alternative activities such as reading, drawing, or walking outside reflects a strategy of diversion and positive substitution. This approach parallels psychosocial interventions for autistic children that emphasize structured leisure and meaningful activity as protective against overstimulation (Cherewick et al., 2023). Technology-based solutions, including the use of apps or white noise, also extend this logic to the digital domain, demonstrating adolescents' capacity to integrate accessible resources into their regulation routines. These findings are consistent with research showing that online and remote interventions can be not only feasible but also socially validated by adolescents (Dumproff & Dowdy, 2023).

The subtheme of structured routines further highlighted the importance of predictability for adolescents in overstimulating contexts. This echoes broader developmental findings that highlight how family routines provide a sense of security and continuity, especially for adolescents with heightened sensitivity (Goldberg & Scharf, 2020). Predictability in the household environment can buffer stress, reduce conflict, and enhance adolescents' readiness to cope with sensory demands.

The third major theme emphasized the role of social support, peer relationships, and family understanding in adolescents' coping. Adolescents reported relief in sharing experiences with peers and seeking validation in social groups, a finding consistent with longitudinal research linking relationship qualities to externalizing and internalizing behaviors in sensitive adolescents (Fischer et al., 2022). Peer support may serve as an important mechanism of normalization, reducing feelings of isolation or stigma associated with sensory sensitivity.

At the family level, adolescents highlighted the importance of parental understanding, such as when parents lowered noise or respected personal space. These findings align closely with previous work showing that parental well-being and stress management influence the extent to which adolescent needs are accommodated (Hart et al., 2019; Rodríguez et al., 2022). Moreover, studies of highly sensitive parents underscore that parents' own sensory sensitivity can shape responsiveness to their adolescents, creating both challenges and opportunities for supportive dynamics (Goldberg & Scharf, 2020).

The role of professional support, including school counselors and therapists, further supports evidence that interventions integrating parents and professionals lead to more effective outcomes (Pine et al., 2024; Scripps et al., 2025). Parent-adolescent dyadic interventions, such as those

trialed in public health contexts, have demonstrated stronger adherence and outcomes compared to parent-only approaches (Bhengu et al., 2025). Our findings suggest that adolescents benefit when parents and professionals form collaborative partnerships in recognizing and responding to sensory difficulties.

The strategies reported in this study collectively highlight the interplay of individual, familial, and systemic dimensions of coping. For example, adolescents' reliance on peer support aligns with research documenting the central role of social identity during adolescence, particularly in contexts where adolescents may feel "different" due to sensory sensitivities (Trew, 2024). Similarly, our findings resonate with studies on adolescents' online engagement, where sensory overload from digital environments is increasingly recognized as a stressor requiring tailored coping strategies (Throuvala et al., 2021).

The findings also connect with evidence from parenting intervention research. Online and single-session interventions have demonstrated feasibility in supporting adolescent mental health (Cardamone-Breen et al., 2018), while remote parent training programs have been validated as effective (Dumproff & Dowdy, 2023). Yet our results caution that adolescents themselves must be centered within interventions; their voices reflect nuanced strategies that may not be visible from parental or clinical perspectives alone. This is particularly significant in contexts where external responses trivialize or stigmatize adolescent sensitivities (Berry et al., 2025).

The study also highlights a gap in research concerning the intersection of sensory overload with socio-cultural contexts. Adolescents in our sample navigated their home environments through a combination of individual and family strategies, echoing findings from low- and middle-income countries where interventions often rely on non-specialist delivery and contextual adaptation (Cherewick et al., 2023). Cross-cultural comparisons, such as those examining parenting among adolescent mothers in South Africa (Berry et al., 2021), further illustrate how socio-economic and cultural factors shape the resources available to adolescents. This reinforces the argument that interventions must be tailored to local conditions and lived realities.

Collectively, our findings contribute to the growing literature on sensory overload and adolescent coping by emphasizing the active role adolescents play in developing adaptive strategies, the critical importance of family support

and communication, and the necessity of interventions that bridge individual, familial, and systemic dimensions.

5. Limitations & Suggestions

Despite its contributions, this study has several limitations. First, the research relied on a relatively small qualitative sample of 25 adolescents from Greece, which limits the generalizability of findings to broader populations. The experiences and coping strategies described may reflect cultural and contextual dynamics specific to this setting, and caution should be exercised when extrapolating findings internationally. Second, the reliance on self-reported interviews introduces potential biases related to recall, social desirability, or adolescents' willingness to disclose sensitive experiences. Although efforts were made to foster trust and confidentiality, some coping strategies may have remained unreported. Third, the study did not include parents' perspectives, which could have provided complementary insights into family dynamics and shared coping strategies. Finally, while NVivo software facilitated systematic coding, qualitative interpretation always involves a degree of subjectivity, and researcher reflexivity remains an important consideration.

Future research should aim to expand sample sizes and include diverse cultural and socio-economic contexts to examine how adolescents' coping strategies may vary across environments. Comparative studies involving both neurotypical adolescents and those with neurodevelopmental conditions would shed light on commonalities and differences in coping with sensory overload. Including parents, siblings, and educators in future studies could provide a more holistic picture of how family and community systems support or hinder coping. Longitudinal designs would also allow researchers to explore how coping strategies evolve over time, and whether early reliance on avoidant strategies leads to different long-term outcomes compared to proactive or adaptive approaches. Additionally, future research should integrate mixed-methods approaches, combining qualitative insights with quantitative measures of stress, resilience, and well-being, to triangulate findings and enhance validity.

For practice, this study suggests that interventions supporting adolescents with sensory overload must incorporate both individual coping strategies and family dynamics. Practitioners should emphasize skills such as mindfulness, cognitive reframing, and structured routines, while also encouraging parents to recognize and

accommodate adolescents' sensory needs. Schools and community organizations can play an important role by providing safe, quiet spaces and integrating sensory-friendly practices into daily routines. Importantly, interventions should prioritize adolescents' voices, ensuring that strategies are co-designed with them rather than imposed externally. By combining individual resilience-building with family-based and community-level support, practitioners can foster more holistic and sustainable approaches to managing sensory overload in adolescents.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this article.

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