

Socialization and Emotional Regulation Challenges in Children with Autism during Sensory Integration Therapy

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ABSTRACT

Children with autism commonly experience challenges in socialization and emotional regulation, which may hinder their engagement in therapeutic and educational activities. This study aimed to explore socialization barriers, emotional regulation processes, therapist intervention strategies, and parental involvement in the context of Sensory Integration therapy for children with autism at Bundaku Autism Clinic Center. This study employed a descriptive qualitative approach. Data were collected from a therapist with extensive experience in autism intervention through in-depth interviews, direct observation of therapy sessions, and analysis of supporting documentation, including children's developmental records. Data were analyzed thematically using procedures of data reduction, data display, and conclusion drawing to identify meaningful patterns related to therapeutic processes and outcomes. The findings revealed four interrelated themes: (1) prolonged adaptation and social withdrawal during the early stages of therapy, (2) gradual development of emotional regulation through consistent Sensory Integration therapy, (3) the use of responsive and reinforcement-based therapeutic strategies, and (4) parental involvement as a sustaining mechanism for therapeutic outcomes. Children who initially exhibited tantrum behaviors, limited social engagement, and difficulty following instructions showed improved emotional stability, increased social responsiveness, and greater participation in therapeutic activities. These improvements were strengthened by consistent collaboration between therapists and parents, particularly through the continuation of therapeutic practices in the home environment. The study concludes that Sensory Integration therapy is effective in supporting social-emotional development and independence among children with autism when implemented consistently and collaboratively. The findings emphasize the importance of therapist-parent partnerships in enhancing and sustaining therapeutic outcomes, offering valuable implications for special education and autism intervention practices.

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Introduction

This study was conducted at Bundaku Autism Clinic Center in Medan, an intervention institution for children with special needs that provides various therapeutic services, including Sensory Integration Therapy. Based on preliminary observations of a child with autism participating in the Sensory Integration therapy program, it was found that the child frequently exhibited tantrum behaviors when facing frustrating situations, such as being asked to complete tasks or follow new instructions. The child also tended to avoid physical contact, cover their ears in noisy environments, and withdraw from social interactions. However, after participating in several therapy sessions on a regular basis, positive changes were observed. The child began to follow simple instructions from the therapist, express needs using short verbal expressions, and demonstrate more controlled emotional responses. These initial observations provide a strong rationale for a more in-depth investigation into socialization challenges and emotional regulation in children with autism within the context of Sensory Integration therapy.

Children with Autism Spectrum Disorder (ASD) generally experience developmental challenges that affect communication abilities, social interaction, and emotional regulation (Maharra Ulfa Kristamara & Ati Kusmawati, 2024). These challenges often hinder children with autism from building social relationships, adapting to environmental demands, and managing emotional expressions effectively (Kurniawan, 2019). Such conditions can significantly influence learning processes, behavioral patterns,

and adaptive functioning in both home and educational environments. According to Sensory Integration theory proposed by Nisa et al. (2025), children with autism experience difficulties in processing sensory stimuli from their surroundings, which limits their ability to respond adaptively. These sensory processing difficulties manifest in social and emotional behaviors such as withdrawal, tantrums, and resistance to specific activities (Lisa Yusmanningsih & Nur Alpiyah, 2025). Previous studies have demonstrated that regular participation in Sensory Integration (SI) therapy contributes to behavioral improvements, including increased compliance with instructions, enhanced social interaction, and reduced tantrum behaviors (Tanawali et al., 2018). Similarly, Waiman et al. (2016) reported that sensory integration-based interventions are effective in improving social competence and emotional regulation among children with autism. Consequently, sensory-based therapy has been recognized as an appropriate approach to support the social-emotional development of children with autism in special education and intervention contexts (Hutahean et al., 2024).

Despite the growing body of evidence supporting the effectiveness of Sensory Integration therapy for children with autism, existing studies have predominantly focused on therapeutic outcomes measured through observable behavioral changes, with limited attention to the therapeutic process itself. In particular, there remains a lack of qualitative research that examines how therapists' intervention strategies and parental involvement interact to address socialization and emotional regulation challenges during therapy. Moreover, few studies have explored this collaborative dynamic within real-world intervention settings in developing contexts, such as specialized clinics in Indonesia. This gap highlights the need for an in-depth qualitative investigation that not only documents behavioral improvements but also elucidates the mechanisms through which therapist-parent collaboration contributes to therapeutic success.

The novelty of this study lies in its emphasis on the synergy between therapist strategies and active parental involvement in the implementation of Sensory Integration therapy at Bundaku Autism Clinic Center. While previous research has largely concentrated on the effectiveness of therapy in modifying children's behaviors, this study provides a comprehensive account of how therapists and parents collaboratively influence therapy outcomes. In practice, therapists apply a reciprocal strategy involving the use of consequences for maladaptive behaviors and reinforcement for adaptive behaviors, while parents ensure the continuity of therapeutic practices at home through sustained communication with therapists. This collaborative approach supports previous findings that emphasize the critical role of family involvement in enhancing the effectiveness of autism interventions (Simonis et al., 2023). Based on this framework, the objectives of this study are to: (1) describe socialization and emotional regulation challenges in children with autism; (2) analyze behavioral changes during the Sensory Integration therapy process; (3) examine intervention strategies employed by therapists; and (4) identify forms of parental involvement in supporting the success of therapy at Bundaku Autism Clinic Center.

Method

This study employed a descriptive qualitative approach to provide an in-depth account of socialization barriers and emotional regulation challenges experienced by children with autism during Sensory Integration therapy at Bundaku Autism Clinic Center. Primary data were obtained from a therapist with substantial professional experience in providing intervention services for individuals with autism at the therapy center. Secondary data were collected from therapy program archives and child developmental evaluation reports. Data collection was conducted through direct observation, interviews, and documentation, allowing the researcher to obtain contextualized information that accurately reflected real conditions in the field.

The research informants were individuals considered to possess relevant knowledge and experience related to the implementation of Sensory Integration therapy at Bundaku Autism Clinic Center. Informants were selected using purposive sampling, based on their direct involvement and professional competence in the therapeutic process for children with autism. The primary informant was a therapist with more than three years of experience in working with children with autism and a comprehensive understanding of the processes and outcomes of Sensory Integration therapy. Data were collected through in-depth interviews, direct observation of therapy sessions, and documentation in the form of children's developmental progress records. These three techniques were applied complementarily to achieve a comprehensive understanding of the implementation and effectiveness of Sensory Integration therapy for children with autism.

Data obtained from observations, interviews, and documentation were presented in the form of narrative descriptions illustrating the children's conditions throughout the therapy process, the strategies employed by therapists, and the role of parents in supporting therapy at home. Data analysis followed

qualitative data analysis procedures, which included data reduction, data display, and conclusion drawing. During the data reduction stage, relevant information was selected in accordance with the research focus; during the data display stage, findings were organized systematically to enhance clarity and interpretability; and during the conclusion drawing stage, data were interpreted to identify patterns and relationships between Sensory Integration therapy, socialization, and emotional regulation in children with autism.

This study received official permission from Bundaku Autism Clinic Center as the research site. All informants, including the interviewed therapist, were provided with a clear explanation of the research objectives and the types of data to be collected. Participation was voluntary and based on informed consent, without any form of coercion. The researcher ensured that all personal information of the informants was kept confidential and used solely for academic purposes. The processes of interviews, observations, and data collection adhered to ethical principles of social and educational research, including respect for privacy, dignity, and the well-being of all individuals involved in the study.

Result and Discussion

This qualitative analysis generated four interrelated themes that describe the socialization challenges, emotional regulation processes, therapeutic strategies, and parental involvement experienced by children with autism during Sensory Integration therapy at Bundaku Autism Clinic Center.

1. Prolonged Adaptation and Social Withdrawal in Therapeutic Settings

A salient finding was the extended adaptation period required by children with autism to engage consistently in therapy sessions. Adjustment to the therapeutic environment was not immediate; rather, it unfolded gradually and, in some cases, required up to six months. During this phase, children exhibited heightened emotional sensitivity, limited attention, and avoidance of social interaction. As described by the therapist:

“Some children take a very long time to adapt. There are cases where it takes up to six months before the child can enter the therapy room calmly and follow the session routinely.” (Therapist, T1)

Although children demonstrated an inherent interest in interacting with peers, this intent was frequently disrupted by emotional dysregulation triggered by sensory overload. Such experiences often resulted in tantrum behaviors and subsequent social withdrawal, which constrained participation in group-based therapeutic activities.

2. Gradual Development of Emotional Regulation through Sensory Integration Therapy

Consistent participation in Sensory Integration therapy facilitated gradual but meaningful improvements in children’s emotional regulation. Over time, children who initially exhibited resistance and emotional instability began to demonstrate increased emotional control and responsiveness. The therapist noted observable behavioral shifts:

“At the beginning, the child could not sit still at all. Now, after several sessions, they can sit calmly, answer simple questions, and follow instructions step by step.”

(Therapist, T1)

These improvements were particularly evident in the reduced frequency and intensity of tantrum behaviors. Emotional responses became more predictable and manageable, suggesting enhanced self-regulation capacity. As one therapist explained:

“Tantrums still happen, but they are much less frequent and do not last as long as before. The child is now easier to calm down.”

(Therapist, T1)

This theme underscores the role of Sensory Integration therapy in supporting adaptive sensory processing, which in turn contributes to emotional stability and increased social engagement.

3. Responsive and Reinforcement-Based Therapeutic Strategies

Therapeutic progress was closely linked to the implementation of structured yet flexible intervention strategies. Therapists employed a reinforcement-based approach that combined clear behavioral consequences with immediate positive reinforcement. This strategy aimed to guide children toward adaptive behaviors while maintaining emotional safety:

“If the child shows inappropriate behavior, there is a clear consequence. But when the child behaves positively, we immediately give praise or rewards so they understand what behavior is expected.”

(Therapist, T1)

In addition, therapists incorporated sensory breaks when children exhibited signs of overload or decreased focus. These breaks functioned as regulatory pauses, enabling children to reorganize sensory input before re-engaging in therapeutic tasks. Such responsive strategies were also associated with improvements in motor coordination and foundational academic skills, including early writing and reading.

4. Parental Involvement as a Sustaining Mechanism for Therapeutic Outcomes

Parental involvement emerged as a sustaining mechanism that extended therapeutic gains beyond the clinical setting. Parents were actively engaged in reinforcing therapy goals through home-based practice, adherence to recommended routines, and continuous communication with therapists. As emphasized by the therapist:

“We always explain to parents what exercises need to be repeated at home, because therapy will not be effective if it only happens here.”

(Therapist, T1)

Children whose parents consistently implemented therapeutic guidance at home demonstrated more rapid and sustained progress. This alignment between clinical intervention and home environment highlights the critical role of family–therapist collaboration in enhancing the effectiveness of Sensory Integration therapy.

Discussion

This study explored socialization challenges, emotional regulation processes, therapeutic strategies, and parental involvement in the context of Sensory Integration therapy for children with autism. The findings are discussed in relation to existing international literature to elucidate how Sensory Integration therapy operates as a dynamic and collaborative intervention within special education and therapeutic settings.

1. Prolonged Adaptation and Social Withdrawal in Therapeutic Settings

The first theme highlights the prolonged adaptation period and social withdrawal experienced by children with autism when entering a new therapeutic environment. This finding aligns with previous research indicating that children with Autism Spectrum Disorder (ASD) often require extended time to adjust to unfamiliar sensory and social contexts due to heightened sensory sensitivity and difficulties with environmental transitions (American Psychiatric Association, 2013; Baranek et al., 2014). Sensory overload has been widely recognized as a trigger for emotional distress and avoidance behaviors, which can manifest as tantrums or withdrawal from social interaction (Dunn, 2017).

Consistent with international studies, the present findings suggest that social withdrawal is not necessarily indicative of a lack of social interest, but rather reflects challenges in regulating sensory and emotional input (Chevallier et al., 2012). The children in this study demonstrated an intention to engage socially, yet this intention was frequently disrupted by emotional dysregulation. This supports the notion that social participation in children with autism is closely intertwined with sensory processing capacity, emphasizing the importance of creating supportive and predictable therapeutic environments.

2. Gradual Development of Emotional Regulation through Sensory Integration Therapy

The second theme demonstrates that consistent engagement in Sensory Integration therapy contributed to gradual improvements in emotional regulation and social responsiveness. These findings are congruent with prior research showing that sensory-based interventions can enhance self-regulation by helping children organize sensory input more adaptively (Ayres, 2005; Schaaf & Mailloux, 2015). Improved sensory modulation has been linked to reduced emotional reactivity and increased behavioral regulation, which in turn facilitates engagement in learning and social activities (Bundy et al., 2020).

The observed reduction in tantrum frequency and increased emotional stability resonate with longitudinal studies suggesting that emotional regulation in children with autism develops incrementally through structured and repetitive intervention experiences (Mazefsky et al., 2013). From a special education perspective, these findings reinforce the role of Sensory Integration therapy as a foundational intervention that supports not only emotional well-being but also readiness for social learning and participation.

3. Responsive and Reinforcement-Based Therapeutic Strategies

The third theme underscores the significance of responsive, reinforcement-based strategies employed by therapists. The use of clear behavioral consequences combined with immediate positive reinforcement reflects principles derived from applied behavior analysis (ABA), while remaining embedded within a sensory-based therapeutic framework. Previous studies have shown that consistent

reinforcement enhances predictability and emotional security for children with autism, thereby promoting adaptive behaviors (Cooper et al., 2020).

Moreover, the strategic use of sensory breaks aligns with contemporary models of self-regulation, which emphasize the need to balance task demands with sensory regulation opportunities (Miller et al., 2007). By allowing children to recalibrate their sensory input, therapists were able to prevent emotional escalation and sustain engagement. This flexible and child-centered approach reflects best practices in special education, where interventions are tailored to individual sensory and emotional profiles rather than rigidly standardized.

4. Parental Involvement as a Sustaining Mechanism for Therapeutic Outcomes

The final theme highlights parental involvement as a sustaining mechanism that extends therapeutic gains beyond the clinical setting. This finding is strongly supported by international literature emphasizing family-centered intervention models in autism services (Dunst et al., 2007; Oono et al., 2013). Parental consistency in applying therapeutic strategies at home has been shown to enhance generalization and maintenance of skills acquired during therapy sessions (Brookman-Frazer et al., 2012).

The present study reinforces the view that therapy effectiveness is amplified when parents and therapists operate within a collaborative partnership. Such collaboration not only ensures continuity of intervention but also empowers parents as active agents in their children's development. Within special education contexts, this alignment is particularly crucial, as children with autism often require consistent support across multiple environments to achieve sustainable progress.

Collectively, the findings of this study contribute to the growing body of qualitative evidence highlighting Sensory Integration therapy as a process-oriented intervention that supports social-emotional development in children with autism. By elucidating the interaction between sensory regulation, therapist strategies, and parental involvement, this study extends existing literature that has predominantly focused on behavioral outcomes alone. The findings suggest that effective intervention for children with autism should be conceptualized as a collaborative and continuous process that integrates clinical expertise with family participation.

Conclusion

This study demonstrates that children with autism at Bundaku Autism Clinic Center experienced significant improvements in socialization and emotional regulation following regular participation in Sensory Integration therapy. Initial challenges, including difficulties adapting to new environments, tendencies toward social withdrawal, and excessive tantrum behaviors, were progressively reduced through the implementation of responsive therapeutic strategies. In particular, the use of a structured reinforcement approach, involving clear consequences for maladaptive behaviors and positive reinforcement for adaptive behaviors, proved effective in supporting behavioral and emotional adjustment.

Children who initially struggled to follow instructions and participate in therapeutic activities showed increased responsiveness to guidance, greater engagement in peer interactions, and more regulated emotional expressions. These improvements were further strengthened by active parental involvement, particularly through the continuation of therapeutic exercises at home and sustained communication with therapists. The findings underscore the effectiveness of Sensory Integration therapy in enhancing social-emotional functioning and promoting independence among children with autism.

Importantly, this study highlights that the success of Sensory Integration therapy is not solely determined by clinical intervention, but is significantly influenced by collaborative partnerships between therapists and parents. Such collaboration plays a critical role in accelerating therapeutic progress and ensuring the continuity of developmental gains across home and educational environments. Consequently, Sensory Integration therapy, when implemented through a collaborative and consistent approach, represents a viable and sustainable intervention model for supporting the social-emotional development of children with autism in special education and intervention settings.

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References

- Anjelina Sembiring, T., Estu Hartiwi, N., Raya Telang, J., Telang Inda, P., Kamal, K., Bangkalan, K., & Timur, J. (2024). *Kendala Dan Solusi Dalam Proses Pembelajaran Anak Autisme Di Sd Negeri Keleyan 1 Bangkalan*. <https://doi.org/10.62383/Dilan.V1i3.478>
- Eben Ezer Sidabutar, B., Neolaka, A., & Simbolon, B. (2020). *Peran Orangtua Dalam Menangani Anak Autisme*.
- Hutahean, M. B., Setiawan, R., Setiawan, S. T., Tanasyah, Y., & Putrawan, B. K. (2024). Pelatihan Pengembangan Kemampuan Sosial Dan Emosional Anak Usia Sekolah Di Yayasan Paguyuban Cikahuripan Nusantara. *Servire: Jurnal Pengabdian Kepada Masyarakat*, 4(2), 109–126. <https://doi.org/10.46362/Servire.V4i2.249>
- Irvan, M. (2017). Gangguan Sensory Integrasi Pada Anak Dengan. *Jurnal Buana Pendidikan*, Xi(23), 14.
- Kurniawan, W. (2019). Pengaruh Terapi Sensori Integrasi Pada Anak Autis Yang Mengalami Gangguan Sensori Di Pusat Layanan Autis Provinsi Bangka Belitung. *Mawa'izh: Jurnal Dakwah Dan Pengembangan Sosial Kemanusiaan*, 10(1), 96–110. <https://doi.org/10.32923/Maw.V10i1.786>
- Lisa Yusmanningsih, N., & Nur Alpiyah, D. (2025). *Penatalaksanaan Metode Sensori Integrasi Melalui Pendekatan Play Therapy Untuk Membantu Mengurangi Temper Tantrum Pada Anak Dengan Kondisi Autism Spektrum Disorder: Studi Literatur Implementation Of Sensory Integration Method Through Play Therapy Approach To Help Reduce Temper Tantrum In Children With Autism Spectrum Disorder: Literature Review*. <http://ejournal.uki.ac.id/index.php/hfj/index>
- Maharra Ulfa Kristamara, & Ati Kusmawati. (2024). Proses Terapi Sensori Integrasi Pada Anak Autis Dalam Meningkatkan Interaksi Sosial Di Pusat Terapi Autis Yasmin. *Risoma: Jurnal Riset Sosial Humaniora Dan Pendidikan*, 2(2), 45–53. <https://doi.org/10.62383/Risoma.V2i2.65>
- Nisa, L., Rukmi, R., Perdani, W., Graharti, R., Sumekar, D. W., Wardani, R., Fiana, D. N., Rahmayani, F., Kedokteran, F., Lampung, U., Ilmu, B., Anak, K., Kedokteran, F., Lampung, U., Klinik, B. P., Kedokteran, F., Lampung, U., Ilmu, B., Masyarakat, K., ... Lampung, U. (2025). Tantangan Dan Strategi Dalam Menangani Anak Dengan Gangguan Spektrum Autisme : Literatur Review Challenges And Strategies In Dealing Children With Autism Spectrum Disorder : A Literature Review. *Journal Of Medula*, 14(10), 2009–2015.
- Penara, S., Alfina, S., Delfianti, H., Uin, A.-R., & Banda, A. (2023). Analisis Permasalahan Anak Autisme. In *Journal Of Disability Studies And Research* (Vol. 2024, Issue 1). Jdsr.
- Shalehah, N., Suminar, T., & Diana, D. (2023). Strategi Guru Dalam Meningkatkan Keterampilan Sosial Anak Autistic Spectrum Disorder (Asd). *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(5), 5757–5766. <https://doi.org/10.31004/obsesi.v7i5.5287>
- Simonis, D. D., Aek, K., Sry, N., Aritonang, R., Rizki, ;, & Ritonga, A. (2023). *Peran Orang Tua Dalam Menangani Anak Autisme*. <https://jurnal.uinsyahada.ac.id/index.php/sjpai/index>
- Soedewi Masjchun Sofwan Kota Jambi Neneng Hasanah, S., Sulthan Thaha Saifuddin Jambi, U., Duren, S., Jambi, M., & Informasi Artikel Korespondensi, I. (2017). Jigc (Journal Of Islamic Guidance And Counseling) Bimbingan Dan Konseling Islam Strategi Terapis Dalam Mendidik Kemandirian Anak Autis Di Sekolah Luar Biasa (Slb). *Jigc*, 1, 27–40.
- Tanawali, N. H., Nur, H., & Zainuddin, K. (2018). Peningkatan Kemampuan Taktil Anak Autis Melalui Terapi Sensori Integrasi. *Jurnal Psikologi Talenta*, 3(2), 64. <https://doi.org/10.26858/Talenta.V3i2.6528>
- Usman, R. A., Annisa Perdana, D., & Raynata, A. (2022). Pengaruh Penerapan Metode Sensory Integration Dalam Perubahan Tingkat Keseimbangan Pada Anak Autisme Di Praktek Mandiri Sepingguan Balikpapan. *Jurnal Physio Research Center*, 2(1).
- Waiman, E., Soedjatmiko, S., Gunardi, H., Sekartini, R., & Endyarni, B. (2016). Sensori Integrasi: Dasar Dan Efektivitas Terapi. *Sari Pediatri*, 13(2), 129. <https://doi.org/10.14238/Sp13.2.2011.129-36>