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DEVELOPING SOCIAL COMMUNICATION SKILLS IN CHILDREN WITH AUTISM SPECTRUM DISORDER AGED 3–4 YEARS THROUGH NON-DIRECTIVE PLAY THERAPY

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Abstract. This single-case intervention study examined the application of non-directive play therapy (NDPT) to enhance social communication skills in a child with moderate autism spectrum disorder (ASD) aged 3 years. The intervention consisted of 32 individual play sessions, each lasting 45–60 minutes, conducted over eight weeks. Data were collected through video recordings, structured observations, and the Social Communication Checklist, and were analyzed using both quantitative and qualitative methods. Results indicated significant improvements in several domains of social communication, including social participation, expressive language, receptive language, and functional play skills. The child demonstrated increased initiation of interaction, more active engagement in joint play, and expanded functional vocabulary during the intervention period. These findings suggest that NDPT may be a promising approach for supporting early social communication development in young children with ASD. The study also contributes preliminary empirical evidence on the application of NDPT within the Vietnamese early intervention context.

Keywords: non-directive play therapy, autism spectrum disorder, social communication, social participation.

1. Introduction

Autism spectrum disorder (ASD) is a complex neurodevelopmental condition characterized by persistent deficits in social communication and social interaction, as well as restricted and repetitive patterns of behavior, interests, or activities (American Psychiatric Association [APA], 2013) [1]. Children with ASD often experience difficulties initiating and maintaining social interactions, interpreting social cues, and developing peer relationships (Lord et al., 2020) [2]. These challenges may significantly affect their participation in everyday social environments such as preschool classrooms and family interactions. Therefore, early intervention programs that target social communication development are essential for improving developmental outcomes in children with ASD.

Play-based approaches have been widely recognized as effective strategies for supporting social and emotional development in young children. Among these approaches, non-directive play therapy (NDPT) emphasizes the child's autonomy and intrinsic motivation in play. In NDPT, the therapist provides a supportive and emotionally safe environment in which the child is free to explore toys, express emotions, and initiate interactions without direct instruction (Josefi & Ryan, 2004) [3]. This approach reduces performance pressure and encourages natural communication,

emotional regulation, and symbolic play. Previous studies have shown that NDPT may promote improvements in social interaction, language use, and adaptive behavior in children with ASD (Barghi et al., 2023; Sumastri & Pastari, 2022) [4], [5].

Despite growing international evidence supporting NDPT, several research gaps remain. Most studies have been conducted in Western contexts, limiting the generalizability of findings to other cultural and educational environments such as Vietnam. In addition, existing research often focuses on group interventions or short-term outcomes, providing limited insight into individual developmental trajectories during intervention. Empirical studies in Vietnam remain scarce and are primarily descriptive case reports without systematic quantitative analysis (Thi et al., 2024; Trần & Nguyễn, 2019) [7], [8]. Therefore, this study aimed to examine changes in social communication skills in a preschool child with ASD following a structured NDPT intervention, thereby contributing preliminary empirical evidence regarding the application of NDPT in the Vietnamese context.

2. Content

2.1. Literature Review

NDPT or Child-Centered Play Therapy (CCPT) has emerged as a promising intervention for children with ASD, addressing core challenges in social interaction, communication, and emotion regulation. Rooted in humanistic and developmental psychology, NDPT is grounded in the principles of unconditional positive regard, empathy, and authenticity (Axline, 1947; Landreth, 2012) [9]. The therapist provides a non-directive, accepting environment in which children lead the therapeutic process through play. This approach aligns with the natural modes of expression and learning in young children and is particularly suited to those with ASD, who often struggle with verbal expression and emotional reciprocity.

Empirical findings over the past decade have provided encouraging evidence of NDPT's potential to enhance social and emotional functioning in autistic children. A randomized controlled trial by Kim-Lui Raise Chan and Ouyang (2024) [10] demonstrated that NDPT significantly improved social responsiveness and adaptive social behavior in 65 children with ASD. The study also found that these behavioral improvements were associated with increased EEG alpha power, suggesting that NDPT facilitates both neural regulation and psychosocial adjustment. Similarly, Salter et al. (2016) [11] reported significant gains in emotional expression and interpersonal functioning following NDPT, highlighting its role in fostering adaptive emotional development.

The importance of therapist characteristics in achieving these outcomes has also been emphasized. Akhlamova, Vilkova, and Golubkova (2025) [12] examined therapist–child interactions and found that consistent use of empathic reflection, emotional labeling, and acceptance during sessions supported emotional competence and affective communication. Their findings underscore that therapist attunement and responsiveness are not merely supportive factors but central therapeutic mechanisms in NDPT. Complementary qualitative research by Overley et al. (2018) [13] further revealed that play therapists working with children with ASD encounter unique relational challenges, such as managing sensory sensitivities and interpreting nonverbal communication. These studies collectively suggest that therapist flexibility and reflective practice are critical to maintaining fidelity to NDPT principles and achieving meaningful therapeutic engagement.

Broader play therapy research reinforces NDPT's contributions to social development. In their systematic review, Leung C. (2015) [14] concluded that play-based interventions -including NDPT -consistently enhance social interaction, cooperation, and emotional understanding among children with ASD. The authors noted that despite methodological diversity, the overall trend points to play therapy as an effective complement to structured behavioral models. Moreover,

developmental research indicates that play supports broader cognitive and social processes. Studies identified a strong association between object play and intentional communication in children with ASD, and that improvements in metacognitive skills were linked to reduced social difficulties over time. These findings suggest that play-based interventions can influence multiple domains of development simultaneously.

Nonetheless, the evidence remains mixed and requires cautious interpretation. Szatmari et al. (2015) [15] highlighted the heterogeneity of developmental trajectories in ASD, with only a minority of children showing sustained gains in adaptive functioning. Similarly, Franchini et al. (2018) [16] found that individual differences in social interest and behavioral difficulties strongly influenced long-term outcomes. Such findings underscore the need for individualized and flexible therapeutic modelslike NDPTthat can adapt to the diverse needs of autistic children.

In summary, NDPT represents a developmentally appropriate, relationally grounded intervention that supports emotional regulation, communication, and social engagement in children with ASD. Current findings converge to suggest that NDPT can promote both behavioral and neurophysiological change, making it a valuable complement to structured, skills-based programs. Nevertheless, further longitudinal and cross-cultural research is required to clarify its mechanisms, establish its long-term efficacy, and inform evidence-based implementation in diverse clinical and educational settings.

2.2. Method

2.2.1. Participant

The participant, referred to as K to ensure confidentiality, is a female child born on March 18, 2021, who was diagnosed with moderate autism spectrum disorder at the age of 2.5 years by a clinical specialist. At the time of the study, K attended an inclusive preschool program and received individual one-to-one intervention sessions.

Selection criteria for participation included:

(1) a confirmed diagnosis of ASD according to DSM-5 criteria;

(2) age between 3 and 4 years;

(3) observable difficulties in social communication skills, including limited verbal communication and reduced social interaction;

(4) parental consent for participation in the intervention and video recording of sessions.

At the beginning of the study, K primarily produced non-meaningful vocalizations, had limited functional speech, and preferred solitary play activities. Interaction with parents at home was relatively limited, and K spent considerable time watching English-language animated programs.

Prior to the study, the research procedures were thoroughly discussed with the family, and informed consent was obtained. The legal guardians provided explicit permission for the video recording of each intervention session for data collection and analysis purposes.

2.2.2. Assessment Tools

The primary tool utilized to measure the child's developmental progress was the Social Communication Checklist (SCC), developed by Ingersoll and Dvortcsak (2019) [17] as part of the *Project ImPACT* curriculum. This instrument was specifically selected for several strategic reasons.

First, the SCC is designed specifically for naturalistic developmental behavioral interventions (NDBIs), making it highly compatible with the Non-Directive Play Therapy (NDPT) approach used in this study. Unlike standardized diagnostic tools that focus on deficit identification, the SCC is a criterion-referenced tool that captures subtle, functional shifts in social engagement and communication within play-based contexts.

The checklist systematically evaluates four core developmental domains:

- Social Participation: Measures the child's ability to initiate and sustain engagement.
- Expressive Language: Tracks the transition from pre-linguistic vocalizations to functional speech.
- Receptive Language: Assesses the child's ability to process and respond to social/verbal cues.
- Play Skills: Evaluates the complexity of object manipulation and symbolic play.

Each item within these domains is rated on a three-point Likert scale: *Frequently* (3), *Occasionally* (2), and *Rarely or Never* (1). This granular scoring system allows for a sensitive pre- and post-intervention comparison, providing a clear quantitative reflection of the intervention's impact.

The selection of the SCC is further justified by its strong psychometric properties. Previous research involving young children with ASD has demonstrated high internal consistency, with Cronbach's alpha coefficients ranging from 0.78 to 0.89 across the four domains. Such reliability ensures that the tool is both stable and accurate for assessing social communication behaviors in early intervention settings. By using the SCC, this study ensures that the observed improvements (as reflected in the significant ANOVA results) are measured by a validated framework tailored to the specific developmental needs of children with autism.

2.3. Procedure

NDPT was conducted over eight weeks, including the following steps:

* Pre-intervention assessment

Before the intervention, the child's developmental characteristics and social communication abilities were assessed through structured observations, parent and teacher interviews, and administration of the Social Communication Checklist.

* Intervention process

The NDPT intervention was conducted over eight weeks, with four sessions per week, each lasting 45–60 minutes, resulting in a total of 32 sessions. Sessions were implemented in a quiet therapy room equipped with a variety of symbolic and creative toys such as dolls, kitchen sets, toy food, medical kits, and construction materials. During sessions, the child was allowed to freely choose toys and initiate play activities, while the therapist maintained a supportive presence, responded empathetically to the child's behavior, and ensured emotional safety without directing play.

Teachers working with the child were introduced to the basic principles of NDPT and received brief supervision to support consistency between therapy sessions and classroom practice.

* Post-intervention evaluation

After the intervention period, the Social Communication Checklist was administered again. Additional qualitative data were collected through observation notes, video analysis of play sessions, and feedback from parents and teachers.

2.4. Data Analysis

The data analysis process followed a rigorous mixed-methods approach to ensure a comprehensive evaluation of the intervention's efficacy. Quantitative data were processed and analyzed using IBM SPSS Statistics software. Specifically, paired-sample t-tests were employed to assess longitudinal changes from pre- to post-intervention, while Analysis of Variance (ANOVA) was utilized to determine significant differences across various experimental conditions. Concurrently, qualitative data—derived from a systematic review of session video recordings and detailed field observation notes—underwent thematic analysis. This involved a multi-stage coding process to identify recurring patterns, behavioral nuances, and specific trajectories in the child's skill development throughout the play therapy program.

2.5. Results

2.5.1. Social Communication Improvements

After 32 NDPT sessions, K demonstrated significant improvement:

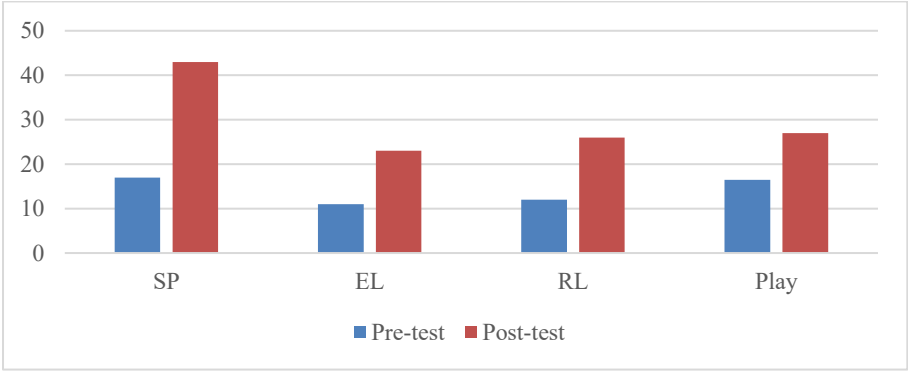

Figure 1. Comparison results of Pre and Post - test

Note: SP: social participation, EL: Expressive language; RL: Receptive Language

Social Participation: *Increased from 17 to 43 points.*

Expressive Language: *Increased from 11 to 23 points.*

Receptive Language: *Increased from 12 to 26 points.*

Play Skills: *Increased from 16.5 to 27 points.*

Table 1. ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
TongTG	Between Groups	2284,333	22	103,833	52,896	,000
	Within Groups	17,667	9	1,963		
	Total	2302,000	31			
TongDD	Between Groups	990,708	22	45,032	44,213	,000
	Within Groups	9,167	9	1,019		
	Total	999,875	31			
TongH	Between Groups	450,542	22	20,479	42,534	,000
	Within Groups	4,333	9	,481		
	Total	454,875	31			
TongC	Between Groups	480,969	22	21,862	30,271	,000
	Within Groups	6,500	9	,722		
	Total	487,469	31			

Results of the quantitative analysis indicated significant improvements in all assessed domains following the intervention. Scores increased from pre- to post-intervention in social participation (17 → 43), expressive language (11 → 23), receptive language (12 → 26), and play skills (16.5 → 27). One-way ANOVA results showed statistically significant differences across measurement phases for all variables ($p < .001$). Post-hoc comparisons using Bonferroni correction indicated that post-intervention scores were significantly higher than those observed in earlier phases of the intervention. In addition, paired-samples t-tests confirmed a significant increase between pre- and post-intervention scores ($p < .001$), suggesting a positive effect of the NDPT intervention on the participant's social communication development.

2.5.2. Behavioral Observations

Social Participation: K became more proactive in interactions, shared toys, and engaged in turn-taking.

Video analysis of play sessions indicated progressive improvements in K's social participation skills across sessions. The most notable gains were observed in the following behaviors: *making eye contact, interacting and communicating with peers* (M = 2.59), *pointing to or offering preferred objects to share* (M = 2.56), and *enjoying face-to-face interaction* (M = 2.53). Prior to the intervention, social participation skills were consistently at the lowest level, characterized by rare occurrence. K preferred solitary play in isolated areas, made little to no eye contact with others, and engaged primarily in activities aligned with personal interests. Overall, the intervention phase demonstrated positive outcomes, supporting increased engagement in social communication.

Before the intervention, K exhibited limited eye contact with teachers, a tendency toward solitary play, and frequent production of non-communicative vocalizations or repetitive English sounds. Following the intervention, marked improvements in social interaction were observed: K initiated play with the therapist and consistently expressed eagerness to enter the therapy room upon arriving at the center. In the early phase, K showed negative reactions when sessions ended (e.g., tantrums, refusal to leave the room); however, by the third week, K was able to leave while holding a toy, and by the sixth week, K accepted session termination upon verbal notification, independently put toys away, and no longer displayed tantrum behaviors.

During play activities, K increasingly selected family- and role-play–oriented toys, such as kitchen sets, toy food, dolls, and medical kits. Initially, K played in a fixed location near the toy shelf; after approximately four weeks, K began bringing toys closer to the therapist and engaging in joint play. K demonstrated symbolic play behaviors, including feeding and hugging dolls, pretending to be a doctor examining the therapist, and inviting the therapist to participate in play roles. A positive therapeutic relationship was established, with K expressing affection through behaviors such as leaning in for cheek contact and actively requesting reciprocal affectionate interactions.

Regarding expressive language development, the intervention yielded a marked increase in K's functional use of Vietnamese, characterized by the emergence of basic requests and initial question-forming abilities. Specifically, K achieved the highest mean score on the ability to respond by stopping an activity by an adult (e.g., stopping when hearing "no") (M = 2.66), followed by the skill of *identifying several body parts* (e.g., eyes, nose, mouth, ears, hair) (M = 2.62). However, K continued to experience difficulties with *looking at people or their images when their name was called* and had limited ability to shift attention to a third object or person when addressed.

Before intervention, K was able to produce short utterances (2–3 syllables), primarily through echolalia. Spontaneous language use occurred mainly in English, influenced by animated media, while Vietnamese was used only when repeatedly prompted. After the intervention, notable improvements were observed in both expressive and receptive language: K sang several Vietnamese songs, used language meaningfully within play contexts, and produced basic requests such as "*help me*" and "*open it*." The frequency of spontaneous repetition of the therapist's Vietnamese utterances increased without prompting. Vietnamese vocabulary related to animals and objects expanded, and K began forming simple questions such as "*What is this*?" and could sometimes answer independently if no immediate response was provided. Nevertheless, K continued to experience challenges in narrative skills, responding to factual questions without visual supports, and answering yes/no or inferential questions. While K interacted effectively with the therapist, communicative interactions with peers in the preschool classroom remained limited.

Substantial growth was also observed in receptive language and communicative initiation, particularly in K's responsiveness to his name, recognition of body parts, and his newfound ability to proactively start interactions. The most prominent improvement in this domain was the use of multi-modal cues to request assistance (M = 2.47). Prior to the intervention, K typically pulled

the teacher's hand to seek help; during the later weeks of intervention, verbal requests such as "*open it*" emerged more frequently, along with modeled phrases such as "*teacher, please help me.*" However, K continued to experience difficulty using verbal language to share emotions with others.

Before intervention, K demonstrated minimal ability to initiate communication, responding primarily only when directly questioned. Throughout the play therapy process, communication initiation skills gradually developed: K spontaneously offered toys to the teacher, invited participation in play activities, and engaged actively in role-play scenarios. Responsiveness to name-calling increased, as evidenced by turning toward and visually orienting to the speaker. K also improved in identifying body parts through movement imitation activities conducted in front of a mirror and during doll play, including recognition of hands, legs, eyes, nose, mouth, and hair.

Play Skills: K progressed from isolated, non-functional play to role-playing activities such as family and doctor scenarios.

K demonstrated substantial improvement in functional play skills, particularly in the ability to use toys for their intended purposes ($M = 2.81$, $SD = 0.609$). Prior to the intervention, K did not engage in purposeful or functional toy use; following the intervention, K was able to appropriately use different types of toys according to their specific functions.

2.6. Discussion

The quantitative results of this study provide robust evidence for the efficacy of Non-Directive Play Therapy (NDPT) in enhancing the developmental profile of a child with ASD. The most striking finding is the statistically significant improvement across all assessed domains ($p < .001$), with post-intervention scores more than doubling in several key areas.

Significant Gains in Social Participation and Engagement

The most substantial numerical increase was observed in *Social Participation*, which surged from 17 to 43 points. The ANOVA results ($F(22, 9) = 52.896$, $p < .001$) underscore that this was not a random fluctuation but a systemic shift in the child's social behavior. This jump of 26 points suggests that the non-directive environment allowed K to move from social isolation to active engagement. By removing the "demand" characteristic of traditional therapy, NDPT likely lowered K's social anxiety, enabling him to initiate interactions more frequently. This aligns with the findings of Barghi et al. (2023), suggesting that when a child feels in control of the social play, their participation levels increase exponentially.

Language Acquisition: From Echolalia to Functional Communication

Both *Expressive Language* (11 to 23 points) and *Receptive Language* (12 to 26 points) showed remarkable growth, with ANOVA confirming high significant differences ($F = 44.213$ and $F = 42.534$ respectively, $p < .001$).

- Receptive Gains: The doubling of receptive scores indicates a breakthrough in K's ability to process verbal instructions and social cues (such as responding to his name and identifying body parts).
- Expressive Evolution: Qualitatively, this was mirrored by a shift from English-based echolalia to meaningful Vietnamese requests.

The parity in growth between receptive and expressive domains suggests that NDPT facilitates a balanced linguistic development. Unlike structured settings where expressive labeling might be drilled, the playroom allowed K to first "absorb" the language (receptive) and then "deploy" it (expressive) for functional purposes, such as asking for help or labeling objects of interest.

The Scaffolding Role of Play Skills

Play Skills increased from 16.5 to 27 points ($F = 30.271$, $p < .001$). While the numerical increase was slightly lower in scale compared to social participation, the clinical impact was profound. The transition from non-purposeful object manipulation to symbolic play acted as a "cognitive bridge." As K began to use toys to represent real-world objects, his need for language increased, thereby driving the improvements seen in the communication domains. This supports

the theoretical framework that play is the primary language of children; as their "fluency" in play increases, their social and linguistic competence follows suit (Axline, 1967; Josefi & Ryan, 2004).

Educational Implications and Inclusive Integration

The significant F-values and the results of the paired-samples t-tests ($p < .001$) provide a strong mandate for integrating NDPT into inclusive preschool settings. The data suggests that for children like K, who may struggle with the rigid structure of a classroom, a play-based intervention can provide the "foundational readiness" required for group learning.

However, despite these "within-session" gains, the disparity between the high scores in the therapeutic setting and the limited peer interaction in the classroom (as noted in observations) remains a point for further development. Future interventions should consider a transitional phase where NDPT principles are applied in small-group peer play to ensure that the 43-point social participation score effectively generalizes to real-world social success.

3. Conclusions

The present study underscores the transformative potential of Non-Directive Play Therapy (NDPT) as a clinical intervention for children with Autism Spectrum Disorder (ASD). The convergence of quantitative data and qualitative observations provides a clear trajectory of improvement in the participant's developmental profile.

First, the statistical analysis reveals that NDPT significantly enhances social participation and communication. The substantial increase in scores—most notably the leap in social engagement (17 to 43 points) and the doubling of receptive and expressive language metrics—confirms that a child-led, low-pressure environment can effectively unlock communicative intent. By prioritizing the child's autonomy, the intervention facilitated a shift from mechanical echolalia to functional, spontaneous Vietnamese language use.

Second, the evolution of play skills from repetitive object manipulation to symbolic representation served as a critical foundation for broader cognitive and social gains. This progression suggests that play is not merely a setting for therapy but the primary mechanism through which social understanding is constructed. The significant F-values across all domains ($p < .001$) validate that the improvements were consistent and systematic throughout the intervention period.

However, while the intervention achieved remarkable success within the therapeutic context, the generalization of these skills to peer interactions in inclusive classroom settings remains a challenge. This suggests that while NDPT is highly effective for building foundational social-emotional readiness, future research and practice should explore "bridging" strategies—such as peer-mediated play—to ensure that these gains translate into sustained social integration.

In summary, this study supports the integration of NDPT principles into early childhood special education. By honoring the child's natural pace and interests, educators and therapists can foster a more responsive, ethical, and effective support system that empowers children with ASD to navigate their social world with greater confidence and competence.

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