



Impact of Video Modeling on Emotional Dysregulatory Behaviors of Children with Autism Spectrum Disorder in Group Therapy

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Abstract

This study investigated the impact of video modeling (VM) on emotional dysregulatory behaviors of children with Autism Spectrum Disorder (ASD) in structured group therapy. Using a pre-test/post-test quantitative design, four male participants aged 8–10 years with ASD Level 1 or 2 were assessed at the Exceptional Learning Center, General Trias, Cavite, Philippines. The Emotion Dysregulation Inventory (EDI) measured baseline and post-intervention levels of Reactivity and Dysphoria. The Emotion Regulation Checklist (ERC) tracked behavioral responses during three weekly group therapy sessions incorporating psychoeducational videos, guided role-play, and group processing activities. Pre-assessment EDI Reactivity T-scores ranged from 33.4–40.9 and Dysphoria T-scores from 46.7–55.2, indicating mild-to-moderate dysregulation. Following intervention, Reactivity T-scores decreased to 31.9–36.5 and Dysphoria T-scores to 26.1–35.6. An independent t-test confirmed statistical significance ($t = 6.86$; $p = 0.00$), rejecting the null hypothesis. ERC data showed a reduction in mean Lability/Negativity scores (10.33 to 7.87) and improvement in Emotion Regulation scores (5.93 to 6.47) across sessions. These findings support video modeling as an effective occupational therapy intervention for reducing emotional dysregulation in children with ASD during group therapy.

Keywords: Autism Spectrum Disorder; Video Modeling; Emotional Dysregulation; Group Therapy; Occupational Therapy; Emotion Dysregulation Inventory; Emotion Regulation Checklist

Abbreviations

ASD: Autism Spectrum Disorder; VM: Video Modeling; EDI: Emotion Dysregulation Inventory; ERC: Emotion Regulation Checklist; OT: Occupational Therapy; ZPD: Zone of Proximal Development

Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by challenges in social communication, behavioral regulation, and interaction. Globally, approximately 1 in 59 children in the United States is affected [8], and Philippine studies document heightened caregiving demands and behavioral disruptions among children with ASD, especially during periods of routine disruption [6]. Emotional dysregulation is among the most prevalent and impairing features of ASD, affecting children's ability to form social connections and participate in daily activities. Research indicates that children with ASD are four to seven times more likely than the general population to cross clinical thresholds for emotional reactivity and dysphoria [5].

Video modeling (VM) is an evidence-based intervention rooted in Bandura's (1977) Social Learning Theory, wherein individuals learn behaviors through observation and imitation. VM has demonstrated efficacy in teaching social and daily living skills to children with ASD [1, 7, 13]. Its application within structured group therapy settings creates opportunities for peer-supported observational learning, scaffolded by Vygotsky's (1978) Zone of Proximal Development (ZPD), wherein children progress with guided support beyond their independent capabilities. The Cognitive Behavioral Frame of Reference in occupational therapy further supports VM as a means of modifying maladaptive behavioral patterns through modeling and reinforcement.

Despite its proven effectiveness in social skill acquisition, the literature reveals a significant gap:

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no study has examined VM delivered in structured group therapy using the Emotion Dysregulation Inventory (EDI) to specifically measure changes in Reactivity and Dysphoria in children with ASD. This study was conducted to address that gap by empirically evaluating the impact of VM on emotional dysregulatory behaviors through a rigorous pre-test/post-test design.

Materials and Methods

Research Design

This study employed a quantitative pre-test/post-test design to evaluate the effectiveness of a structured VM intervention on emotional dysregulation in children with ASD. Statistical analyses included descriptive statistics, independent t-test, and Pearson correlation.

Participants and Setting

Purposive sampling was used to recruit four male participants aged 8–10 years, diagnosed with ASD Level 1 ($n = 1$) or Level 2 ($n = 3$), currently enrolled in group therapy at the Exceptional Learning Center in General Trias, Cavite, Philippines. All participants attended weekly OT sessions (2 hours/session). Inclusion criteria required a verified ASD diagnosis, capacity to engage with video content, and written informed consent from parents/guardians. Exclusion criteria included severe cognitive or physical impairments that would preclude participation.

Instrumentation

Three tools were used:

Emotion Dysregulation Inventory (EDI): A standardized caregiver-report instrument measuring Reactivity (intense, poorly regulated emotional responses) and Dysphoria (low positive affect, emotional distress). It was administered pre- and post-intervention and has strong psychometric properties across ASD populations [9, 10].

Emotion Regulation Checklist (ERC): A 24-item observer-report tool with two subscales—Lability/Negativity and Emotion Regulation—completed jointly by the researcher and occupational therapist during each intervention session [3, 11].

Video Modeling Intervention: Three structured weekly group therapy sessions (90–120 minutes each), each featuring psychoeducational videos targeting emotion regulation, social skills, and conflict resolution; guided role-play in rotating pairs; and group processing discussions using five open-ended questions per scenario.

Procedure

Pre-assessment EDI was administered to caregivers to establish baseline dysregulation levels. Over three consecutive weeks, VM sessions were conducted: Session 1 (Emotion Regulation and Conflict Resolution), Session 2 (Social Skills and Emotional Identification), and Session 3 (Sadness, Anger, and Self-Regulation). The ERC was completed by the researcher and supervising OT during each session. Post-assessment EDI was administered following Session 3. Ethical approval was obtained; all participant identities were kept confidential.

Results and Discussion

Demographic Profile

All four participants were male. Two participants were 10 years old (50%), one was 9 years old (25%), and one was 8 years old (25%).

Table 1: Pre- and Post-Assessment EDI T-Score Summary.

Domain	Pre-Assessment Range	Pre-Assessment Peak Item	Post-Assessment Range	Change
Reactivity	33.4 – 40.9	Item 6 & 59 (T = 40.9)	31.9 – 36.5	↓ 4–9 pts
Dysphoria	46.7 – 55.2	Item 43 (T = 55.2)	26.1 – 35.6	↓ 11–21 pts

Table 2: Independent T-Test Results.

Statistic	Value
Pre-Assessment Mean (all EDI items)	40.14
Post-Assessment Mean (all EDI items)	33.20
t-Statistic	6.86
t Critical (one-tail)	1.70
p-value (one-tail)	0.00
Pearson Correlation	–0.17

Three participants had ASD Level 2, and one had ASD Level 1. All attended OT once weekly for 2-hour sessions. Therapy experience ranged from 5 to 9 years. Three participants were in inclusion-only programs; one received additional SPED services. The male-predominant sample is consistent with ASD's higher male diagnosis rate [8].

Baseline Emotion Dysregulation (Pre-Assessment EDI)

Pre-assessment Reactivity T-scores ranged from 33.4 to 40.9, all below the clinical mean of 50, indicating mild to moderate dysregulation. The highest-scoring items were Item 6 (Cannot calm down without help; T = 40.9), Item 59 (Easily triggered/upset; T = 40.9), and Item 21 (Hard to calm down when mad; T = 40.4). The lowest was Item 52 (Has mood swings; T = 33.4).

Dysphoria T-scores ranged from 46.7 to 55.2. Item 43 (Very little makes them happy) had the highest T-score (55.2)—above the normative mean—indicating clinically meaningful anhedonia, a finding that shaped the intervention design toward emotionally engaging, relationally rich content (Table 1).

Behavioral Responses During Intervention (ERC)

ERC Lability/Negativity subscale mean scores decreased from Session 1 (M = 10.33, SD = 1.35) to Session 3 (M = 7.87, SD = 1.89), with a transient spike in Session 2 (M = 9.60, SD = 3.24). This midpoint behavioral escalation—reflected in increased impulsivity and transition difficulties—was interpreted through Vygotsky's ZPD as a productive therapeutic challenge rather than regression. Session 3 stability confirmed that participants had moved through the zone and developed more regulated responses.

ERC Emotion Regulation subscale means scores increased from Session 1 (M = 5.93) to Session 2 (M = 6.67), with relative stability at Session 3 (M = 6.47). Item 1 (Is a cheerful child) improved from 12 to 14 across sessions. Item 18 (Displays flat affect) decreased from 14 to 11, indicating greater emotional expressiveness. Reduced standard deviation in Session 3 (3.73) reflected increasing group consistency and suggested that lower-performing participants had progressed toward the group mean.

Effects of Video Modeling on Emotion Dysregulation (Post-Assessment EDI)

Post-assessment Reactivity T-scores ranged from 31.9 to 36.5. The most improved items reached T = 31.9: Item 3 (Explosive outbursts), Item 10 (Destroys property), and Item 52 (Mood swings). Dysphoria

T-scores dropped to a range of 26.1 to 35.6—a reduction of 11–21 points across all items. The most clinically meaningful change was Item 43 (Very little makes them happy), which dropped from $T = 55.2$ to $T = 35.6$, representing a substantial reduction in anhedonia over just three sessions.

The independent t-test confirmed statistical significance ($t = 6.86 > \text{critical value of } 1.70$; $p = 0.00 < 0.05$), leading to rejection of the null hypothesis. The Pearson Correlation of -0.17 indicated a weak inverse relationship between pre- and post-assessment scores, suggesting that participants with higher baseline dysregulation showed greater post-intervention gains, consistent with structured visual scaffolding approaches benefiting more symptomatic individuals (Table 2).

Discussion

These findings provide empirical support for VM as an effective occupational therapy intervention for reducing emotional dysregulation in children with ASD. The significant reductions in both Reactivity and Dysphoria domains align with existing literature demonstrating VM's efficacy in behavioral and social skill development [1, 4, 13]. The particularly pronounced decline in anhedonia (Item 43) suggests that structured, relational, video-based learning may address affective dimensions of dysregulation—not merely behavioral ones—a finding with important implications for OT practice.

The midpoint behavioral spike mirrors expectations from Vygotsky's (1978) ZPD framework: transient disorganization in Session 2 signaled productive engagement with material that exceeded individual coping thresholds. Therapist-guided processing, peer role-play, and reflective activities supported participants in moving through this zone toward more regulated functioning by Session 3. These finding challenges practitioners to normalize rather than reduce therapeutic challenge at critical intervention points.

The group therapy format itself functioned as a therapeutic agent. Peer co-regulation—observed as spontaneous nonverbal support between participants during Sessions 2 and 3—is consistent with Schaaf and Nightlinger's (2011) assertion that group settings function as change mechanisms, not merely delivery venues. Combined with the visual, structured, and repetitive nature of VM, this approach aligns well with the learning preferences of children with ASD and supports occupational therapy's person-environment-occupation framework.

Limitations include the small, male-only sample, short intervention duration, absence of a control group, and lack of follow-up assessment. These factors limit causal inference and generalizability. The pre-test/post-test design cannot rule out maturation, Hawthorne effects, or natural developmental progression as contributing factors.

Conclusion

This study demonstrates that a structured VM intervention embedded in group therapy significantly reduced emotional dysregulation—specifically Reactivity and Dysphoria—in young children with ASD over three sessions. The EDI proved clinically sensitive in detecting subclinical dysregulation, and the ERC provided meaningful session-level behavioral data. These findings contribute empirical evidence to the growing base supporting video modeling as an occupational therapy tool for this population. Future research should employ randomized controlled trial designs with larger, more diverse samples, extended intervention periods, follow-up

assessments, and parent/caregiver training components to examine the durability and generalizability of these effects.

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