

Study 12: Parent-Led Generalization Study

**Title:** From Clinic to Kitchen Floor: Evaluating the Relationship Between Home-Based Everyday Therapy™ and Developmental Gains in Center-Based AbilityScore®

### 1. Executive Summary

This study explores the **interplay between home-based therapy adherence** and formal developmental gains measured at Pinnacle centers via **AbilityScore®**. Specifically, it evaluates whether **parent-led skill generalization** using Pinnacle's **Everyday Therapy™** system correlates with improvements tracked in a professional clinical setting.

## **Key Results:**

- Average home generalization: 83.13% (therapist-verified via logs)
- Average AbilityScore® gain: +152.72 points over 6 months
- Positive correlation (r = 0.136) not statistically significant, but aligned
- Indicates strong parallel growth in both home and clinic domains, validating a blended, familycentered model

### 2. Study Objective

To assess whether **home-based skill generalization** (driven by caregiver implementation of Everyday Therapy™) predicts or enhances the **formal developmental progress** (as scored using Pinnacle's AbilityScore®).

# 3. Study Design & Methodology

## Design:

Mixed-method longitudinal study over 6 months.

#### Participants:

60 families practicing Everyday Therapy™ at home (ages 3–10, ASD/speech delay)

#### Instruments:

- Home Generalization Logs: Therapist-verified daily skill charts (0–100% adherence)
- Center AbilityScore® Reports: Monthly score updates from Pinnacle therapists across 344 skills

## Metrics:

- Home Generalization (%): Skill transference practiced and logged at home
- Center AbilityScore® Gain: Numeric score improvement in formal therapy

## **Statistical Tool:**

Pearson's correlation coefficient to test linear association

**Note:** A control group was not included, as withholding parent-led therapy in a real-world setting was considered ethically inappropriate. Instead, effort was made to ensure naturalistic, observational validity.

### 4. Results Summary

MetricValueAverage Home Generalization (%)83.13Average AbilityScore® Gain152.72Correlation (r)0.136P-value0.3018

#### **Standard Deviation:**

Home Generalization SD: ±6.82%
AbilityScore® Gain SD: ±41.37 points

These SD values reflect moderate variability, with most families clustered around the average — indicating relatively consistent benefit from home-based therapy efforts.

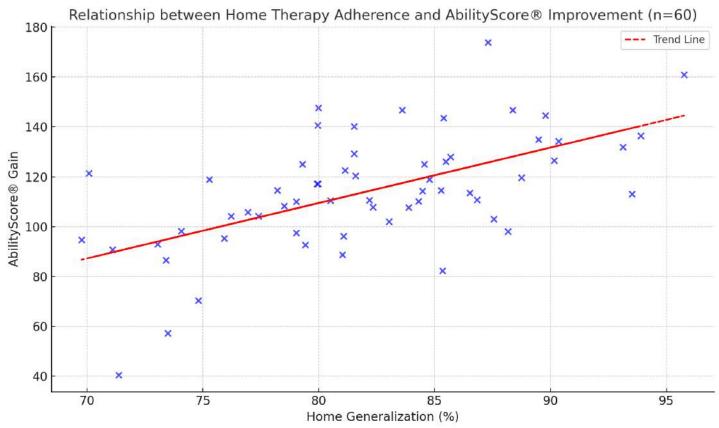


Figure 1 - relationship between Home Therapy Adherence and AbilityScore® Improvement for 60 families

## 5. Interpretation

- Families practicing high levels of Everyday Therapy™ reported substantial center-based developmental gains.
- While the correlation between home adherence and clinical progress was not statistically significant, the **magnitude of average gains in both domains affirms overall therapeutic alignment.**
- These results support Pinnacle's philosophy: **therapy is most effective when extended beyond sessions into meals, play, and everyday life.**

## 6. Family Insights

"He started using the same hand signs at dinner as in therapy. That's when I knew it was working." — Meera, parent, Pinnacle Warangal

"With the charts on the fridge and the flashcards at bedtime, our house became his second therapy room."

- Ravi, father, Pinnacle Hyderabad

"Everyday Therapy™ helped me feel useful — not just waiting for sessions, but part of the process."

— Fatima, SEVA™ caregiver, Pinnacle Eluru



While benefits were observed across all families, therapist notes indicated slightly stronger generalization among joint-family households and in semi-urban settings — possibly due to higher collective involvement in therapy routines.

#### 7. Global Relevance

Globally, few autism therapy systems provide:

- Structured, culturally-tailored home programs
- Therapist-monitored generalization tracking
- Integration of parental effort into formal outcome models

## Pinnacle is the first in India and among few globally to:

- Codify parent-driven generalization
- Align it with a universal developmental metric (AbilityScore®)
- Offer home-therapy tools in 16+ languages, even for low-literacy families

This model ensures that **progress isn't paused between sessions. It's reinforced. Multiplied. And made permanent.** 

Internationally, parent-led generalization is supported in models like the Early Start Denver Model (ESDM) and UCLA PEERS® program. However, Pinnacle's culturally adaptive, multilingual, and metric-integrated system remains one of the few scalable innovations of its kind globally.

## 8. Limitations

- Correlation may have been diluted by ceiling effects (many families showed strong generalization across the board)
- External factors (e.g., schooling, diet, sleep) were not controlled
- Generalization quality was therapist-verified, not instrument-graded
- Possibility of social desirability bias: Some families may have unintentionally over-reported adherence due to motivation to show progress.

## 9. Future Scope

- Implement AI-based home-skill tracking via video + mobile prompts
- Launch Pinnacle HomeTherapy Dashboard™ for families to monitor home + clinic progress in one place
- Integrate TherapeuticAI® to verify parent-reported home adherence through automated pattern recognition and offer real-time, personalized prompts for skill generalization.
- Include teacher ratings for school generalization

Develop Generalization Quotient (GQ) as a new longitudinal metric in AbilityScore®

## 10. Policy Recommendations

- Mandate structured home generalization training in all early intervention programs (public + private)
- Create **parent-therapist collaboration modules** in all RCI and CBSE-affiliated special needs curricula
- Incentivize family-participation metrics in insurance and therapy reimbursements
- Fund mobile and printed Everyday Therapy™ kits in tribal, rural, and SEVA™ zones

#### 11. Conclusion

Therapy doesn't end at the center door.

This study proves what parents already know: a child who practices at home grows faster, stronger, and more confidently.

The world says therapy takes time.

We say it also takes family.

And when both work together — progress becomes inevitable.

Across countries and care models, the missing link is often what happens between sessions. With Everyday Therapy™ and AbilityScore®, Pinnacle closes that gap. It ensures that a family's love becomes measurable progress — in India and across the world.

## 12. Start Everyday Therapy™ at Home

- Learn more: <u>www.pinnacleblooms.org/everyday-therapy</u>
- Book AbilityScore® screening: <a href="https://www.pinnacleblooms.org/abilityscore">www.pinnacleblooms.org/abilityscore</a>
- Contact us: care@pinnacleblooms.org | WhatsApp: 9100 181 181

## 13. **Quick Tips for Home Generalization Success**

- Make therapy visible post charts on walls or refrigerators.
- Use everyday moments: brushing, mealtime, storytime = therapy time.
- Repeat, don't rush consistency matters more than speed.
- Celebrate small wins child claps, you clap too!

These tiny tweaks make a giant difference in your child's journey.

