



School-based Physical Therapy Services: An Analysis of Individualized Student Outcomes using Goal Attainment Scaling

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Purpose

Due to minimal evidence for school-based physical therapy,¹ we examined individual student outcomes using Goal Attainment Scaling (GAS)² following school-based physical therapy. We expected that aspects of services would predict the outcomes.

Participants: Physical Therapists (PTs)

Physical therapists from across the USA working in elementary schools.

Attributes	Participating PTs (n=111)
Female Gender, n (%)	106 (95.5%)
Age in years, Mean (SD)	46.1 (9.09)
White Race, n (%)	107 (96.5%)
Hispanic/Latino Ethnicity, n (%)	2 (1.9%)
Degrees, n (%)	Certification: 2 (1.8%) BS: 60 (54.1%) MPT: 35 (31.5%) DPT: 14 (12.6%)

Participants: Students

5-12 year-old students who received physical therapy.

Parent-reported data	Students (n=302)
Female Gender, n (%)	131 (43.5%)
Age, Mean (SD)	7.3 (2.01)
White, n (%)	218 (72.2%)
Hispanic/Latino Ethnicity, n (%)	51 (17.3%)

References

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Methods

- PTs translated students' Individualized Education Program goals into sub-goals using GAS.
- Researchers categorized goals into posture/mobility, recreation/fitness, self-care, and academics.
- PTs identified the primary goal they focused on during the school year.
- PTs reported services weekly for 6 months using the School-Physical Therapy Interventions for Pediatrics (S-PTIP)^{3,4} data collection form.
- PTs rated the students' GAS goals at the end of the school year.

Analysis

- GAS scores for the primary goal were dichotomized into two groups, those with GAS scores ≥ 1 (n=119) and those with GAS < 1 (n=177).
- Comparisons on PT service variables were made between these two groups using chi-square tests and two-sample t-tests for categorical and continuous variables, respectively.
- Logistic regression was used to examine multiple variable relationships while accounting for age and gross motor function.
- Service variables included in the model were 1) total minutes with students, 2) total minutes of services on behalf of the student (consultation/collaboration and documentation), and 3) sum of categories of interventions (neuromuscular, musculoskeletal, cardiopulmonary, integumentary, orthoses, mobility, mobility assistive, positioning, equipment, educational, assessment, other).

Results

- The majority (58%) of primary goals were categorized as posture/mobility.
- Forty percent of students exceeded their primary goal (GAS = 1 or 2).
- Thirty-five percent of students met their primary goal (GAS = 0).

Student who scored ≥ 1 GAS

40 more minutes of services on behalf of the student	p=0.04
42 more minutes of PE/recreation activities	p=0.04
40 more group minutes	p=0.06
Double the minutes on self-care activities	p=0.13
20 more minutes of mobility activities	p=0.38

Preliminary regression analysis showed age, gross motor function, and minutes on behalf of the student predicted higher GAS scores.

- Greater number of minutes on behalf of the student were found to increase the odds of having ≥ 1 GAS scores (p=0.06).
- Students with a Gross Motor Function Classification level of I/II had an 80% increase in the odds of ≥ 1 GAS scores (p=0.08).
- Younger students (5-7 years) had a 42% increase in the odds of ≥ 1 GAS scores (p=0.18).

Conclusions

Seventy five percent of the students met or exceeded their primary GAS goal across the year.

Students who improved the most received more PE/recreation activity, group services, and services on behalf of the student.

Clinical Relevance

Goal attainment scaling is a useful means of developing individualized outcomes and monitoring change within school-based physical therapy. The time PTs spend directly interacting with students is not the only productive component of student success. The time spent on behalf of the student in consultation/collaboration and documents also impacts students' outcomes.

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