

Mapping Goals from the AquOTic™ Trial to the Occupational Therapy Practice Framework



Background



Drowning is a leading cause of unintentional death in children on the autism spectrum.¹



Traditional swim lessons often fail to address the underlying sensory, cognitive, motor, and behavioral characteristics that influence how children on the autism spectrum participate in aquatic environments.²

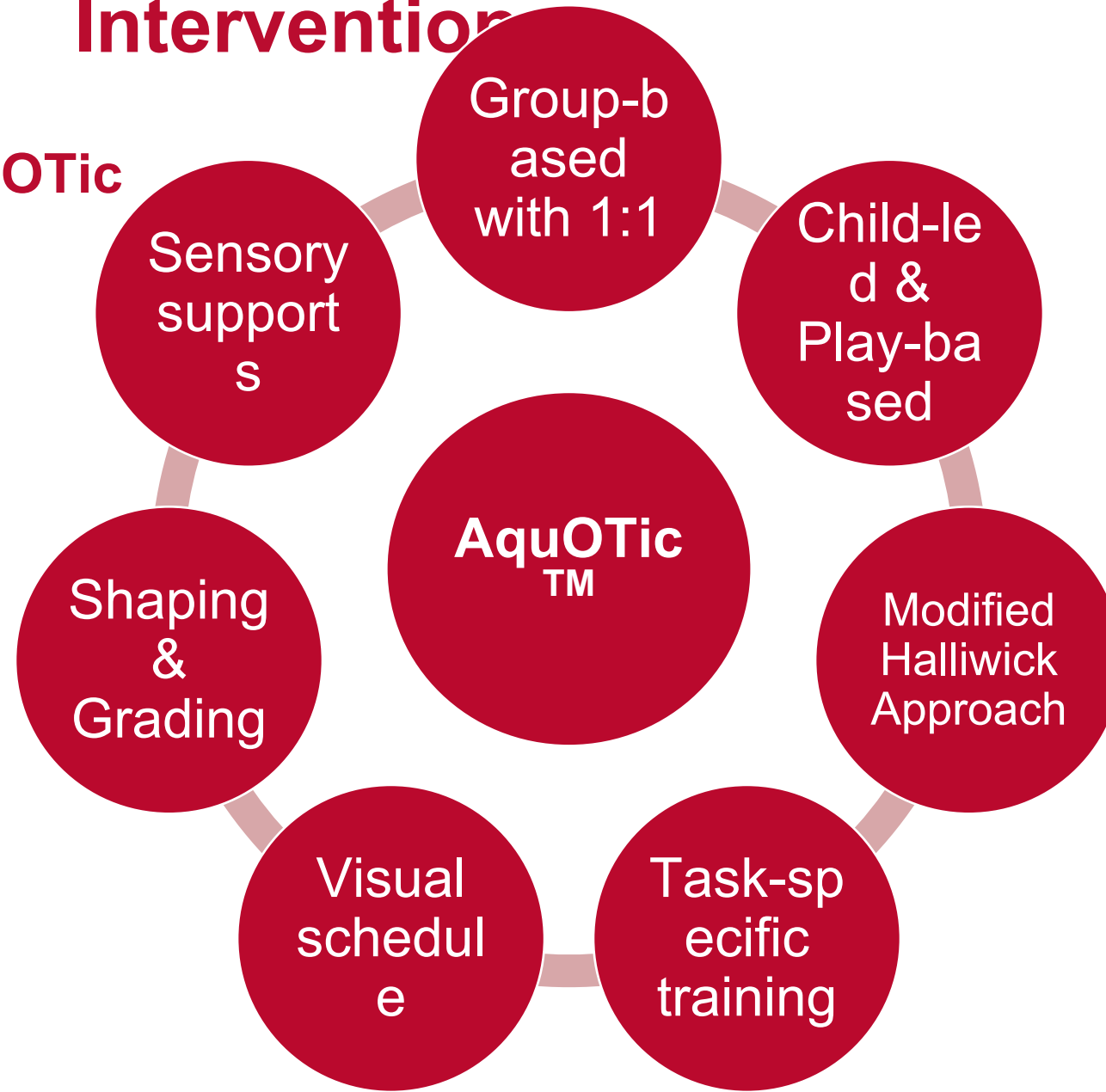


Swimming is a valued occupation that requires complex performance skills and client factors which are central to occupational therapy practice.³



AquOTic: An Aquatic Occupational Therapy Intervention

Figure 1. Key Elements of AquOTic Intervention



Purpose

We mapped caregiver- and therapist-derived goals to the OTPF-4 to demonstrate AquOTic's fidelity to OT and clarify its distinct therapeutic value.



Methods



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Design & Participants

Randomized
controlled trial
(Clinical Trials:
NCT05524753)

37 children ages
5 to 9 years old
on the autism
spectrum



Measures

Canadian Occupational Performance Measure (COPM)

- Goal-oriented, individualized, client-centered tool
- Scale from 1-10
- Rated on importance, performance, and

Goal Attainment Scaling (GAS)

- Standardized client-centered scale to measure progress on individual goals
- 5-point scale from -2 to +2
- Baseline at -1
- Expected level of achievement at 0



Data Collection

4-5 goals created by
caregivers using
COPM

4-5
individualized
goals created by
therapist using
GAS



Occupational Therapy Practice Framework (OTPF-4)

- Describes the central concepts that ground occupational therapy practice⁴
- Divided into specific domains and processes

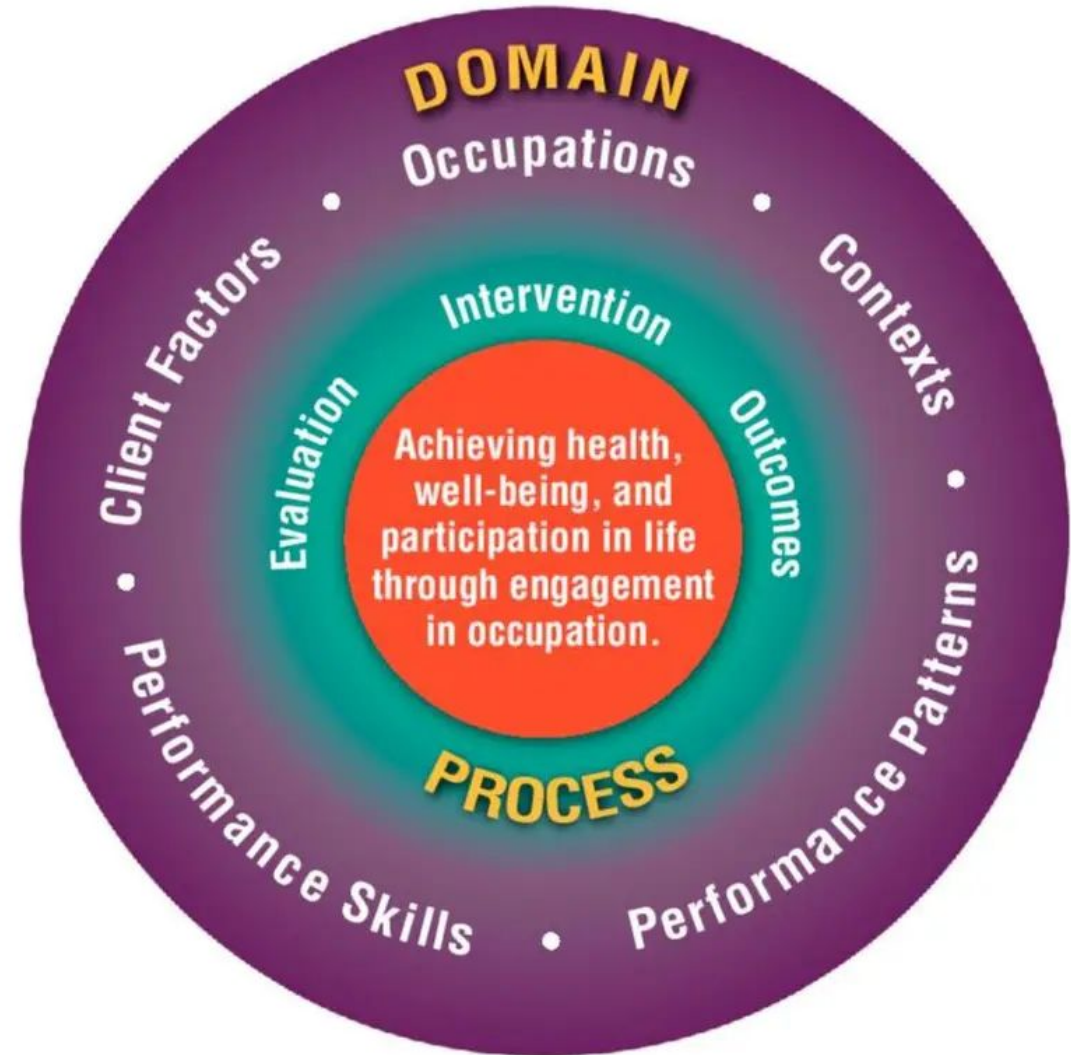


Figure 2. OTPF-4 Domain and Process



Analysis

- Two licensed occupational therapists independently coded all goals using the OTPF-4 categories
 - Resolving discrepancies through consensus



Results



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**(n = 231) clearly
mapped
onto the OTPF-4.**



Figure 3: Frequency of AquOTic Goals Mapped to OTPF-4 Subdomains: Therapist vs Caregiver Perspective

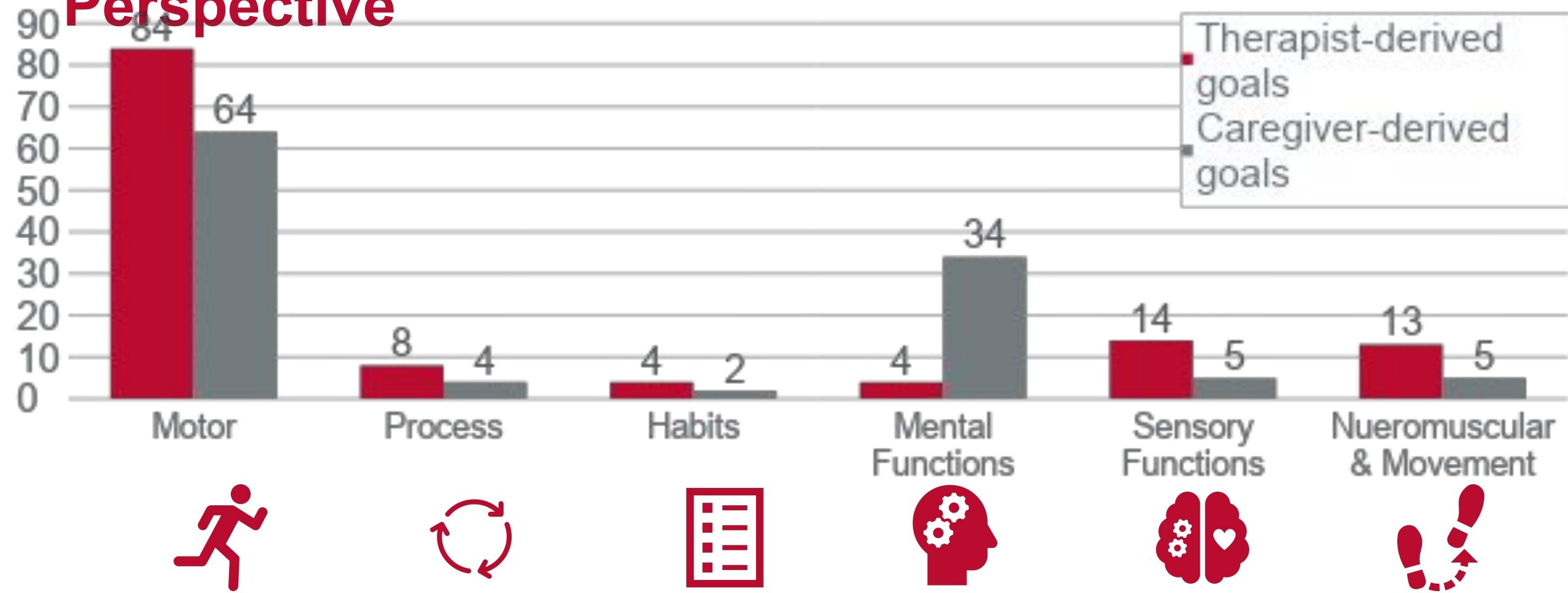


Table 1. Goal Categories Mapped to OTPF-4

OTPF-4 Domain	Example Goals
Performance Skills	
Motor	• Entering and exiting a float position • Kicking with a device
Process	• Initiates getting out of chest deep water • Submerges face to look for toy
Performance Patterns	
Habits	• Waits to enter pool until given safe word • Only getting in with adult present
Client Factors	
Mental Functions	• Confidence in water • Safety around water
Sensory Functions	• Touch lips to the water • Tolerate head out of upright
Neuromuscular & Movement	• Treading water • Exiting pool multiple times



Impact

- **AquOTic directly targets OTPF-4 domains, demonstrating its role as aquatic occupational therapy rather than adaptive swim instruction.**
- The high frequency of motor, sensory, and safety-related goals reflects the complex, multidimensional needs of children on the autism spectrum in aquatic environments.
- Differences between caregiver priorities and therapist priorities highlight the clinical importance of collaborative goal setting to create comprehensive intervention plans.



Citations

1. Guan, J., & Li, G. (2017). Characteristics of unintentional drowning deaths in children with autism spectrum disorder. *Injury Epidemiology*, 4(1), 32.
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2. Kemp, E., Nikahd, M., Ackerman, M., Howard, M., Darragh, A., & Crasta, J. (2024). Water competency and sensory processing among children on the autism spectrum. *The American Journal of Occupational Therapy*, 78(6), 7806205050.
<https://doi.org/10.5014/ajot.2024.050750>
3. Mische Lawson, L., D'Adamo, J., Campbell, K., Hermreck, B., Holz, S., Moxley, J., Nance, K., Nolla, M., & Travis, A. (2019). A qualitative investigation of swimming experiences of children with autism spectrum disorders and their families. *Clinical Medicine Insights: Pediatrics*, 13, 1179556519872214.
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4. American Occupational Therapy Association. (2020). Occupational Therapy Practice Framework: Domain and Process—Fourth Edition. (2020). *The American Journal of Occupational Therapy*, 74(Supplement 2), p1-p87.
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Full Manuscript

Kemp, E., Sansone, I., Black, C., & Crasta, J. E. (2026). Effectiveness of Aquatic Occupational Therapy to Support Water Competency of Children on the Autism Spectrum. *The American Journal of Occupational Therapy*, 80(3), 8003205020. <https://doi.org/10.5014/ajot.2026.051459>

