

Reliability of Teletherapy as a Service Delivery Model for School-Based Occupational Therapy

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Background

Rural healthcare has many challenges in modern society. There is a lack of availability of services, lack of skilled providers, or even socioeconomic status to pay for these services. In rural school systems, many students who qualify for services may not have access to specialists, have limited access (e.g. therapist co-op) or their family may not have funds to travel the distance to the specialist in order to receive care. These barriers can prevent families and their children from beneficial treatments and interventions they need, to maximize their participation in daily living, especially in rural states like Montana, where they may not have the funds to travel for care.

With recent technological advances, many healthcare practitioners and specialists are beginning to use systems for telemedicine, or telehealth, where a medical consultation or service is provided through technology, not in-person. According to the American Telemedicine Association, there are over 200 telemedicine networks operating nationwide, with over half of the hospitals in the U.S using some form of telemedicine. Telemedicine is a cost-effective way for patients to receive services they would not typically receive in person, or receive on a minimal basis. Especially with the Triple Aim focus of healthcare to decrease overall health costs and improve the health of a population, telemedicine appears to be a viable service delivery model for healthcare practitioners.

As part of the Occupational Therapy Code of Ethics, occupational therapists are expected to practice the values of beneficence and nonmaleficence, to provide the best care for clients while not doing harm or putting their safety and health in jeopardy. The American Association of Occupational Therapy (AOTA) has given an official position on this model, stating that it is within the scope of practice of occupational therapy, as it is not an intervention, merely a service delivery model. AOTA additionally recommend using clinical judgement as they would use with in-person sessions, as well as abiding by the Code of Ethics and state regulatory measures.

Focused Question

Is teletherapy a reliable occupational therapy service delivery model to increase functional ability and outcomes in school-aged children?

Methods

The topic was approved by both researchers. Search terms were developed by the occupational therapist. Databases utilized and search terms for each database can be seen below.

PubMed	Occupational therapy, function, telerehabilitation, telemedicine, pediatrics, school, improvement, teletherapy, functional improvement
CINAHL	Occupational therapy, rehabilitation, function, telerehabilitation, telemedicine, pediatrics, school, improvement, adolescent
Cochrane, Scopus, Medline Plus	Occupational therapy, rehabilitation, function, telerehabilitation, telemedicine, pediatrics, school, improvement, adolescent, teletherapy

Articles identified using the listed search terms were then subject to inclusion and exclusion criteria. Each criteria can be seen listed below. Inclusion Criteria:

- Level I, II, III study
- Article published in English
- Occupational therapist treating participants at the time of the study.
- Permission granted to researchers from participants guardians/parents
- Functional outcome measured utilizing standardized and non-standardized occupational therapy assessments

Exclusion Criteria:

- Study older than 8 years
- Participants not currently enrolled in school
- Level IV, V, and qualitative studies
- No professional opinions or dissertations

In some studies, participants had a diagnosis affecting functional participation (e.g. autism, cerebral palsy, etc). However, this did not necessitate article exclusion, as occupational therapists may have these clients in the school system. This may however impact significance of final results in the studies.

Results

Based on the inclusion and exclusion criteria, 5 articles were approved. Due to recent technology advances, this delivery model is new and minimal research has been done on the model, hence the limited number of articles identified.

Level of Evidence	Study Design/ Methodology	Number of Articles Selected
I	Systematic reviews, meta-analysis, randomized controlled trials	0
II	Two groups, nonrandomized studies (e.g., cohort, case-control)	0
III	One group, nonrandomized (e.g., before and after, pretest, and posttest)	5
		Total: 5

In all of the studies, researchers found that all measured outcomes were increased. Functionally, fine motor and gross motor abilities, and even participation in daily activities demonstrated a significant increase.

School-aged children increased their Brunnicks-Oseretsky Test of Motor Proficiency Short Form 2 (BOT2-SF) for improved fine motor integration as well as fine motor precision. Also using the Pediatric Evaluation and Disability Inventory—Computer Adapted Test (PEDI-CAT), the participants participation in and functional ability to partake in ADL tasks significantly increased, increasing independence with these tasks. Using this technology to provide additional caregiver training increased caregiver confidence in caring for these children.

Limitations

- Current levels of research- it would be more significant if Level I and Level II research were utilized, rather than just case studies.
- Sample size- sample size in all the studies were small, whereas larger sample sizes could indicate more generalizable results.
- State Legislature- no clearly defined language regarding teletherapy in the Montana Annotated Code. No restriction but no limitations either. Under current law, in-person services are equal to telehealth, despite conflicting verbal opinions of Board Members.

Bottom Line for OT

- **Clinical and Community-Based Practice of OT:** The findings in these studies indicate that this delivery model can be utilized successfully within the OT scope of practice. It is important to consider the level of confidence of the practitioner as well as education of this model before use. If a practitioner is not comfortable utilizing this model, it would be beneficial to go through additional training from continuing education sources in order to prepare for successful implementation.
- **Program Development:** This delivery model can be utilized in concurrence with typical occupational therapy interventions. It does not require nor necessitate being a stand alone program, as it is a service delivery model, not an intervention.
- **Societal Needs:** Broad application of this service delivery can increase coverage in rural areas or areas of need. Specialists can reach more clients than they might in the clinic alone, and clients can receive services that are not available in their community. This model also reduces costs associated with traveling therapists and clients, while increased therapist productivity at these sites with reduced need for travel.
- **Healthcare Delivery and Policy:** Success in these studies as well as the official position of AOTA should be indicative to insurance companies that this is a viable service delivery model. Practitioners may need to advocate for their skills in this area, as it is becoming a more prominent service delivery model.
- **Education and Training of OT Students:** Many students are briefly introduced to this model in graduate school. However, in-depth exploration and exposure are not present. Occupational therapy students would benefit from increased knowledge about this model in order to prepare for a successful future career utilizing all the tools at their disposal.

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