FACULTÉ DE MÉDECINE ET DES SCIENCES DE LA SANTÉ —
Recherche en Science de la Santé — Sherbrooke, Québec, Canada

Transferring pediatric pain evidence into physiotherapy practice:

A context-specific systematic approach

Karen Hurtubise[1,2] & Chantal Camden[1,3]

1. Faculté de Médicine et Sciences de la Santé, Université de Sherbrooke, Sherbrooke, QC 2. Department of Psychology, University of Calgary, Calgary, AB 3.CanChild Centre for Childhood Disability, McMaster University, Hamilton, ON.

Karen Hurtubise: karen.hurtubise@usherbrooke.ca
Chantal Camden: Chantal.Camden@usherbrooke.ca

SUMMARY

A knowledge –to-practice gap continues to exist in physiotherapy (PT).

This qualitative project piloted a **systematic approach** to identify **context-specific barriers** and **facilitators**.

Knowledge translation frameworks proved useful in ascertaining **the determinants and behaviors** and **selecting implementation strategies.**

The results will be used **to develop an evidence based knowledge implementation plan.**

OBJECTIVE

To pilot a multi-stakeholder systematic approach using the CFIR and TDF to identify context-specific barriers and facilitators requiring targeting to **translate pain evidence into pediatric physiotherapy practice**.

BACKGROUND

Effective context-specific implementation interventions are needed to change physiotherapists' behaviors.

The **Consolidated Framework for Implementations Research** (CFIR) and **Theoretical Domains Framework** (TDF) provide a structure for **investigating potential barriers and facilitators to delivering evidence-based intervention**.

Rarely have these frameworks been used to study the **knowledge implementation barrier and facilitator** to pediatric physiotherapy practice.

Youth and their caregivers voices and choices are also absent from the literature

METHOD

This project used a qualitative exploratory design and a deductive data analysis process informed by the CFIR and TDF.

Participants = Clinicians, including PT's (n=6) & physician (n=1); youth (n=4) & parents (n=4); healthcare managers (n=2).

Recruitment

- Participants were recruited with the assistance of the site leadership team, rehabilitation programs, the Family Resource Centre.
- Clinicians and physicians were included if they had at least 2 years experience with the pediatric chronic pain population
- Youth and parents were included if they had experienced with physiotherapy intervention in the last two years.

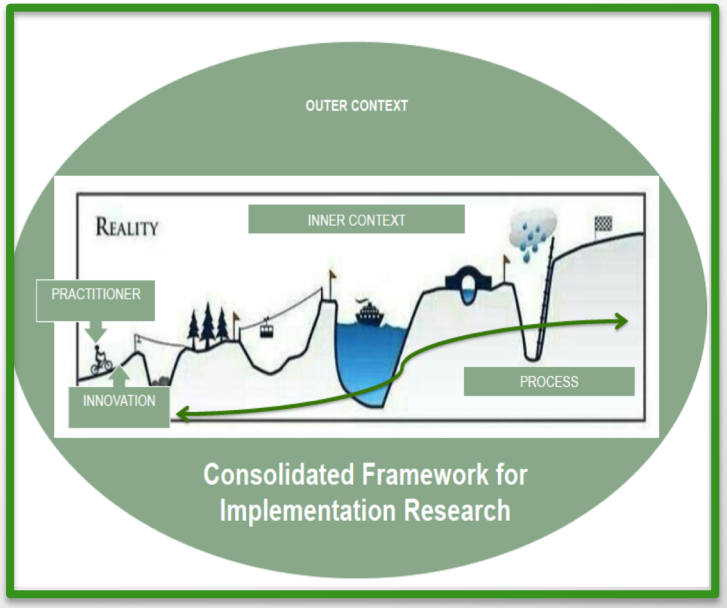
Data Collection

- Clinicians & physicians = Focus group using Think Out Loud protocol
- Youth & caregivers = Semi-structured interview
- Manager = Semi-structure interview

Data Analysis

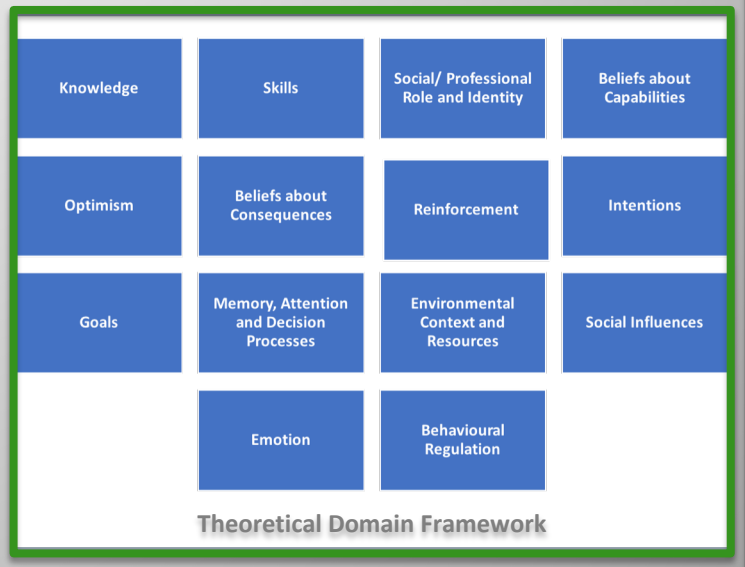
- Discussions were transcribed verbatim & de-identified.
- Line by line coding of the transcripts by CFIR and TDF domain definitions was them completed, with high frequency domains subsequently coded as barriers or facilitators.
- Group differences were compared at each coding stage.

Figure 1. Methodology



The **CFIR** is a meta-framework that emphasized **determinants** of implementation active primarily on the **organizational level,** including **intervention characteristics, outer setting, inner setting and process features.**[1,2,4]

The **TDF** is a well-operationalized implementation determinants framework that provides a high-level elaboration of **concepts** mainly **related to the individual level of change.**[1,5]

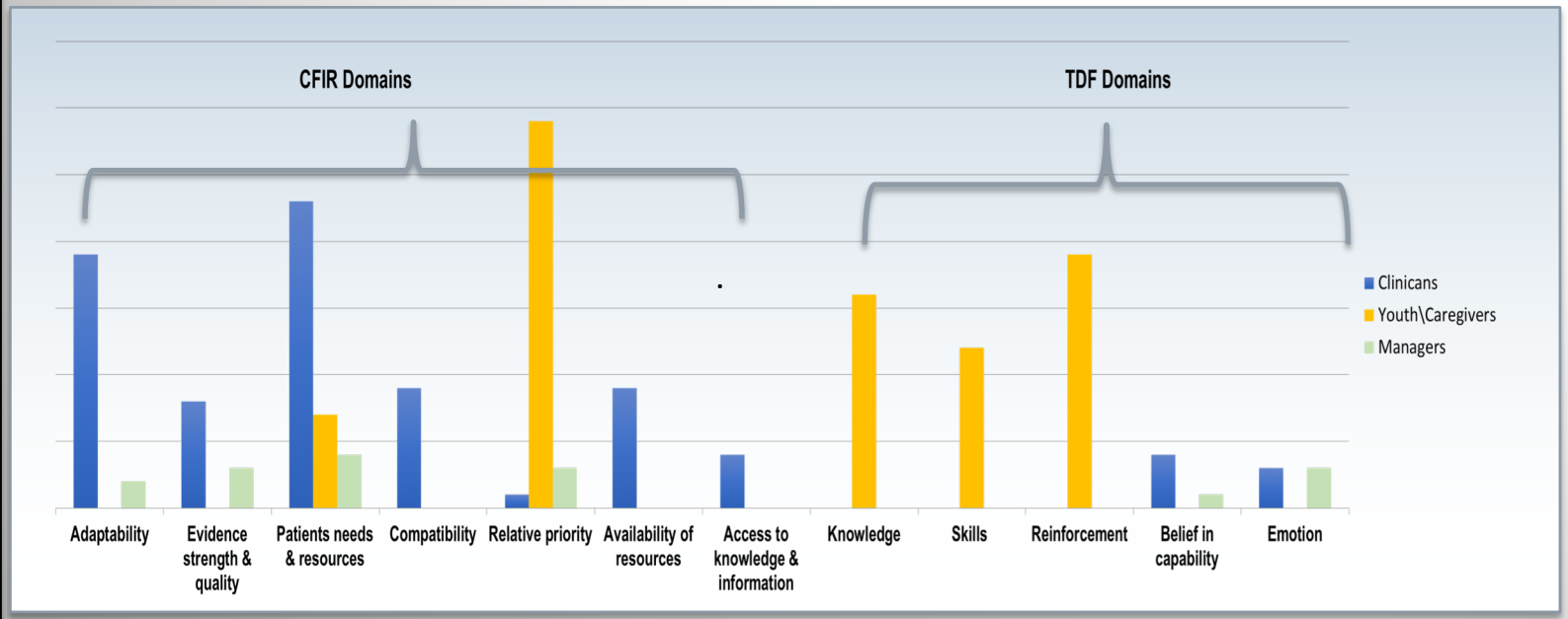


REFERENCES

1. Birken et al (2017). Combined use of the Consolidated Framework for Implementation Research (CFIR) and the Theoretical Domains Framework (TDF): a systematic review. *Implement Sci.* 1:22.
2. Damschoder et al (2009). Fostering implementation of health services research finding into practice: A consolidated framework for advancing implementation science. *Implement Sci.* 1:50..
3. Fonteyn et al (1993). A description of Think Aloud method and protocol analysis. *Qualitative Health Research.* 3:4. 430-441.
4. Kirk et al (2016). A systematic review of the use of the Consolidated Framework for Implementations Research. *Implement Sci.* 11:72.
5. Michie et al (2005). Making psychological theory useful for implementing evidence based practice: a consensus approach. *Qual Saf Health Care*. 14:26-33.

RESULTS

Figure 2. High frequency CFIR & TDF domains distribution per participant group



Youth and parents valued interventions that **increased their knowledge and skills** to self-manage and opportunities for **peer reinforcement.**

'Anything that allows the patient themselves to manage their own condition. And then they learn long-term management strategies, so things that will help them support themselves for the rest of their lives" [Youth 1].

Clinicians altered interventions to better meeting **patient & families** within the **available of resources**. A **lack of high quality evidence** to inform practice was identified.

"It wasn't an extensive lit review. Quite honestly there is not enough data out there to be able to look at it to know how long the intervention should be. It's not there" [Clinician 1].

Management supported evidence that helped meet **patient needs.** However they questioned clinicians' lack of adoption **of available evidence.**

"*I have asked the clinicians how they decide on the intensity and frequency of therapy and they have no answer. They have yet to adopt the published determining frequency guidelines*" [Manager 1].

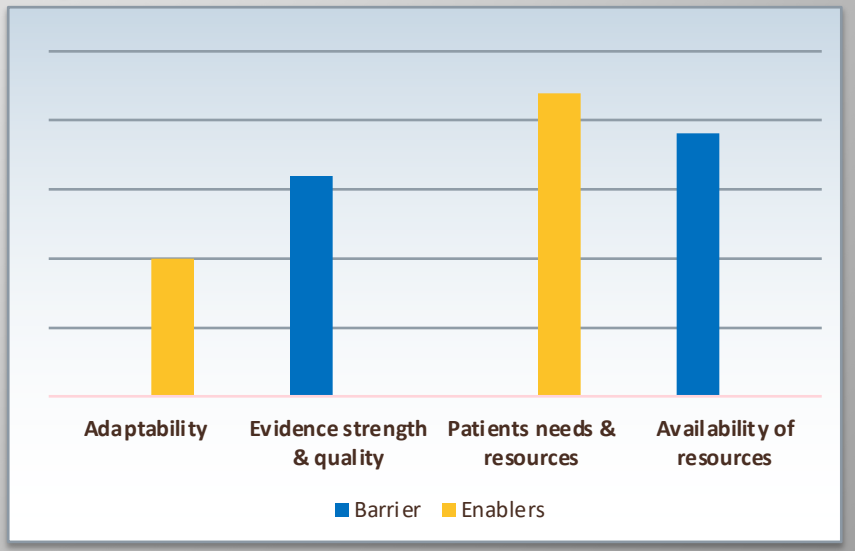
Meeting patient needs was an important **enabler** recognized by clinicians and mangers alike, in the implementation of evidence-based PT interventions for this population.

Access to resources, including time, was a **barrier** frequently acknowledged by clinicians to evidence implementation.

A **lack of strong high quality evidence** was a **barrier** to informing practice acknowledged by clinicians, yet questioned by managers.

- Further information is required to determine if this was due to a **clinicians lack of knowledge of relevant literature, time or capabilities to complete a search and review.**

Figure 3. Barriers & Enablers



RESULTS

Sampling Strategy

Including representatives from the various stakehold groups enabled the **contrasting of assumptions** betwe groups.

The inclusion of youth and their parents **highlighted their values & intervention preferences,** important aspects of evidence-based practice that are often overlooked.

Data Collection Methods

The open-ended structure of the **Think Aloud protocol**, previously used to uncover what and how information is prioritized during problem-solving tasks[3], was **inclusive, and easy to conduct**

Data Analysis & Deductive Theoretical Frameworks

The **Theoretical Domains Framework** helped detail the **individual clinician** (provider-drivers) **& patient/caregiver** (consumer-drivers) characteristics, while the **Consolidate Framework for Implementation Research** assisted in highlighting those features related the **intervention, its implementation, and the context** (organization-drivers).

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LIMITATIONS & RECOMMENDATIONS

The focus group format used with clinician participants may have **limited the depth of the data** collected.

- **Individual semi-structured & context observations** should be explored in the future.

The limited structure of Think Out Loud protocol ensured unbiased responses from participants.

- A **semi-structure interview guide** using the CFIR & TDF domains as prompts could provoke further reflection into barriers and enablers not previously considered.

Further research is required to explore the **reproducibility and generalizability** of this approach to other PT interventions, circumstances and environments.

CONCLUSION

The results indicate that the knowledge implementation plan for our context should include:

- **clinician-targeted** implementation strategies,
- intervention **co-design**, where patients and families input is continuously collected and shared,
- **synthesized research summaries** shared regularly by a **respected member of the team,**
- **intervention outcome data** are regularly analysed and distributed.