

Disability Inclusion, Intersectionality, and Knowledge Translation

KTDRR's 2024 Virtual KT Conference

October 15, 16, and 18

Center on
**KNOWLEDGE TRANSLATION FOR
DISABILITY & REHABILITATION RESEARCH**

Enrollment, Adherence, and Retention Rates Among Musculoskeletal Disorders Rehabilitation Practitioners in Knowledge Translation Studies

A Systematic Review and Meta-regression

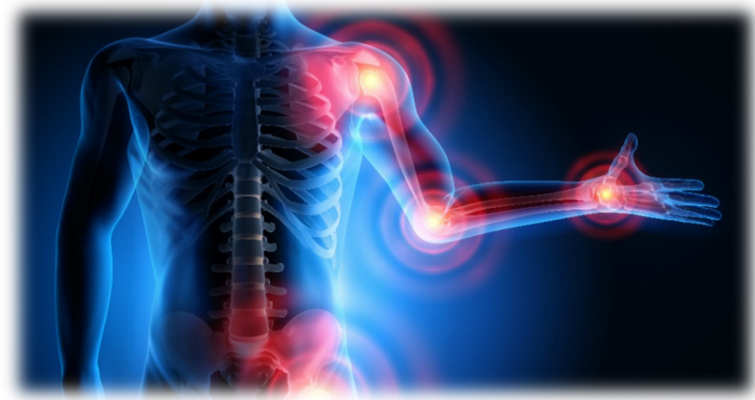
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October 18, 2024

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Research Context



- Musculoskeletal disorders (MSDs)
 - One of the most common health conditions experienced worldwide [1]
 - Economic burden of MSDs is estimated to be \$37 billion by the Public Health Agency of Canada [2]
- Rehabilitation practitioners (physiotherapists, occupational therapists, chiropractors) [3]
 - Deliver care to over 11 million Canadians with MSDs.
 - With an estimated increase to 15 million patients by 2030.
- Substantial research-practice gaps among rehabilitation clinicians persist [4], despite the availability of clinical practice guidelines to inform practice in rehabilitation [5].
- Knowledge translation (KT) interventions can promote the use of research evidence [6] at multiple levels [7].

Rationale

- Low participant enrollment, adherence, and retention rates are major factors.
 - Contribute to the success or failure of KT intervention [8].
 - Influence the estimation of the effectiveness of any intervention [9].
- Assessing those rates may help researchers [10]
 - Develop more appealing KT interventions.
 - Improve the design of future trials → increase their validity and generalizability.
- Enrollment, adherence, and retention rates have not been described in KT studies.



Objectives

This systematic review aimed to:

- 1) Estimate the enrollment, adherence, and retention rates of KT interventions targeting rehabilitation practitioners in charge of patients with MSDs.
- 2) Identify factors likely to affect the enrollment, adherence, and retention rates.



Methods (Literature Search)

- A search strategy included subject headings (MeSH), keywords, and synonyms for:
 - MSDs, KT, and Rehabilitation
- Databases:
 - OVID MEDLINE, EMBASE, PsycINFO, CINAHL, and Cochrane databases
- From the inception to October 2022
- Three independent reviewers screened the titles and abstracts and the full-text reports



Methods (Eligibility Criteria)



- Participants → All types of rehabilitation practitioners
 - Physiotherapists, Occupational Therapists, Osteopaths, or Doctor of Chiropractors
- Intervention → KT interventions according to the Expert Recommendations for Implementing Change (ERIC) classification [12]
- Outcomes → Three feasibility measures
 - Enrollment rate (% who were accepted to participate/all eligible participants)
 - Adherence rate (% who completed the intervention/all participants who were assigned to the intervention group)
 - Retention rate (% who completed through to the first follow-up point/the participants who started the study in each group [IG] or [CG])
- Study design → As recommended by the Effective Practice and Organisation of Care (EPOC) systematic reviews [11].
 - Randomized Clinical Trials (RCTs), Cluster RCTs, Non-RCTs, and Before-and-after studies

Methods (Data Extraction)

Study characteristics

- Year of publication
- Country
- Study design
- Study duration
- Number of the study group
- Study duration
- Number of follow-up points
- Number of outcomes

KT interventions

- Types of KT interventions
- Number and duration of the KT interventions
- Mode of delivery
- Intensity of the intervention

Practitioners

- Age
- Profession
- Types of MSDs
- # of practitioners approached
- # of practitioners eligible to participate
- # of practitioners who refused to participate
- # of practitioners accepted to participate
- # of practitioners assigned to each study group
- # of practitioners who adhered to the KT intervention
- # of practitioners participated, at least in the first follow-up point
- Reasons for refusal to participate

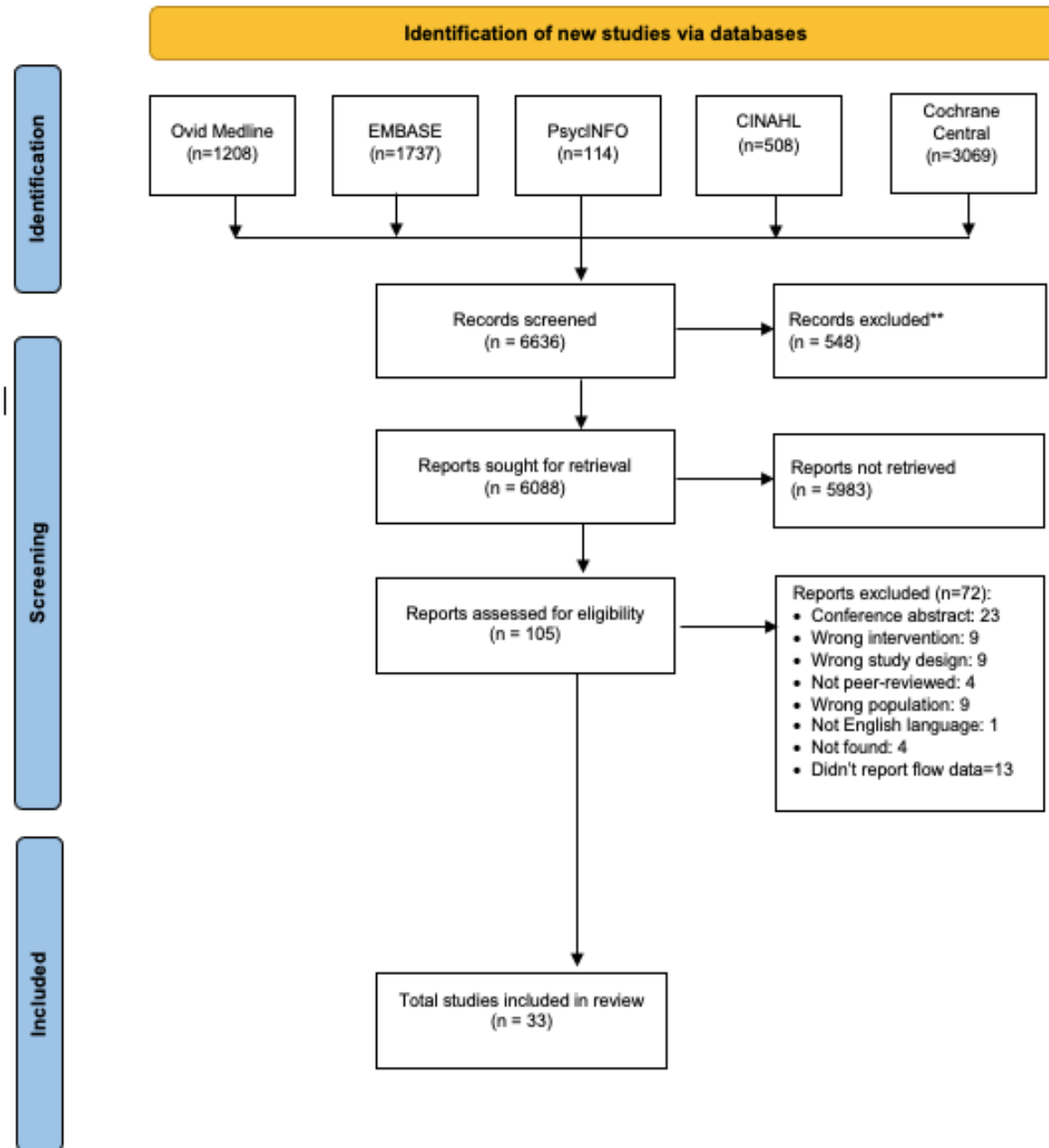


Methods (Data Analysis)

- Meta-regression
 - Enrollment rates calculated for all participants
 - Retention rates calculated to IG and CG
 - Adherence rates calculated for IG only
- Meta-regression model
 - Assess the correlation between the potential variables and enrollment, adherence, and retention rates

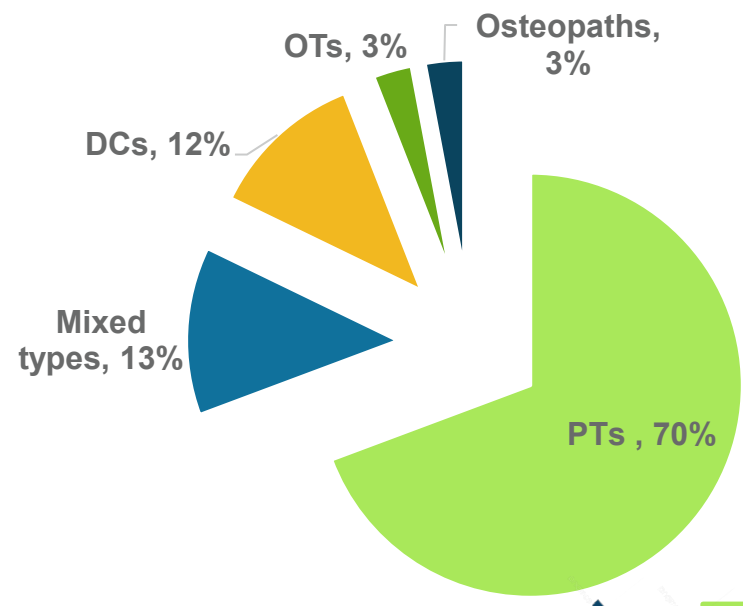
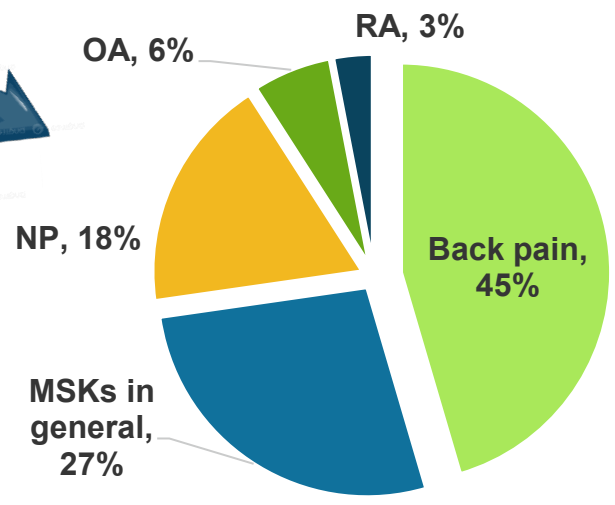


Results

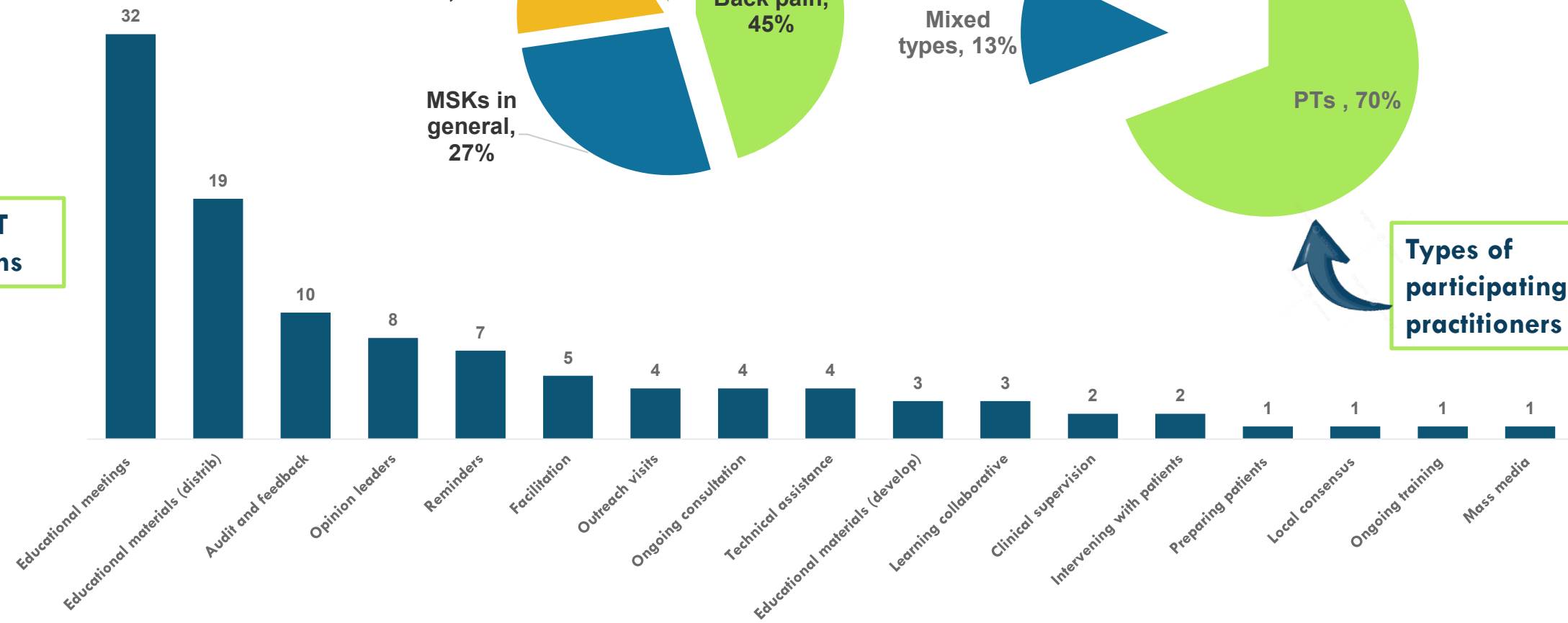


Results (cont'd)

Types of MSKs



Types of KT interventions

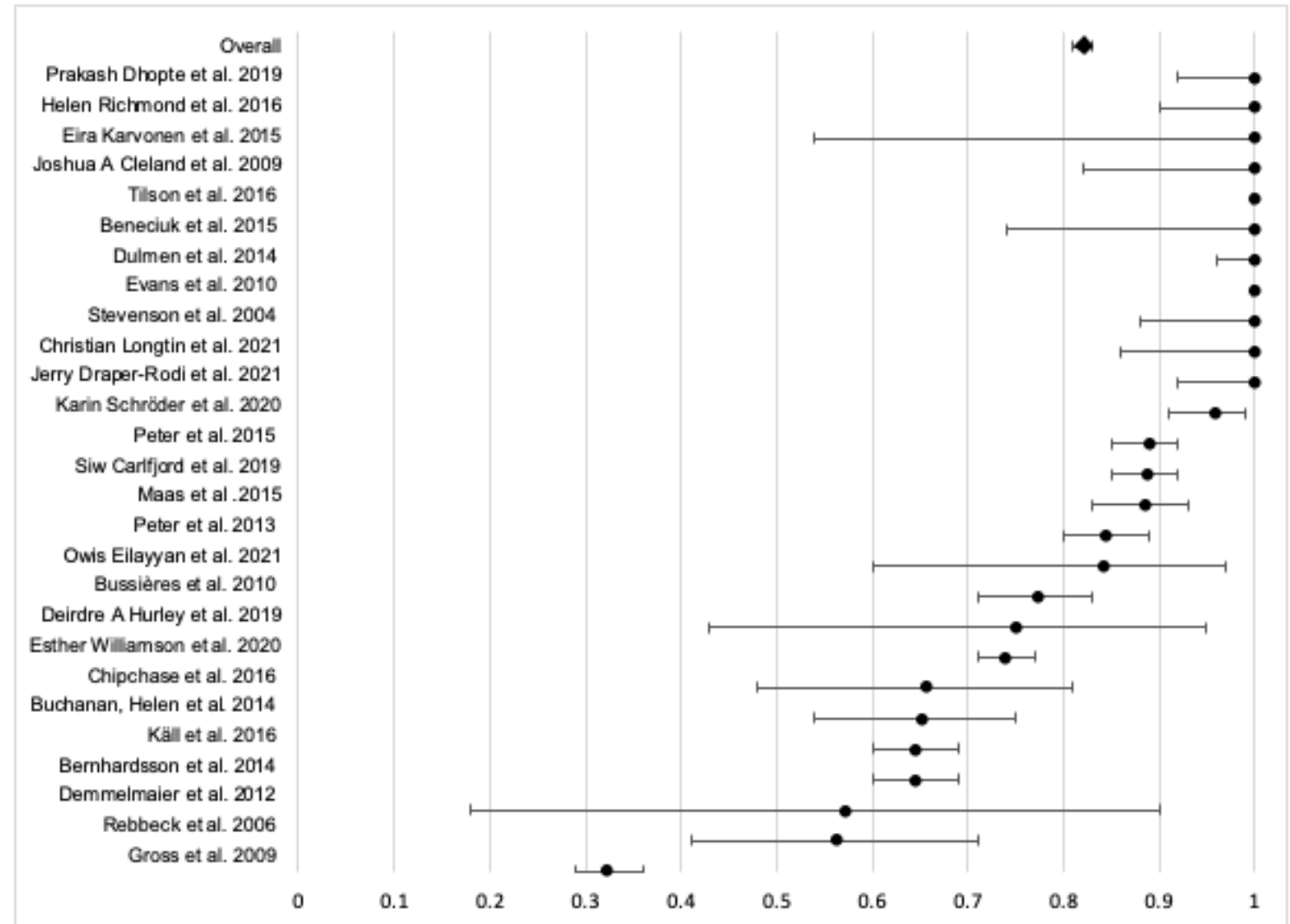


Types of participating practitioners

Enrollment, Adherence, and Retention Rates

- The overall enrollment rate was 82%.
 - (Ranges 32%–100% in 11 studies)

Fig. 2 Forest plot of the enrollment rates.

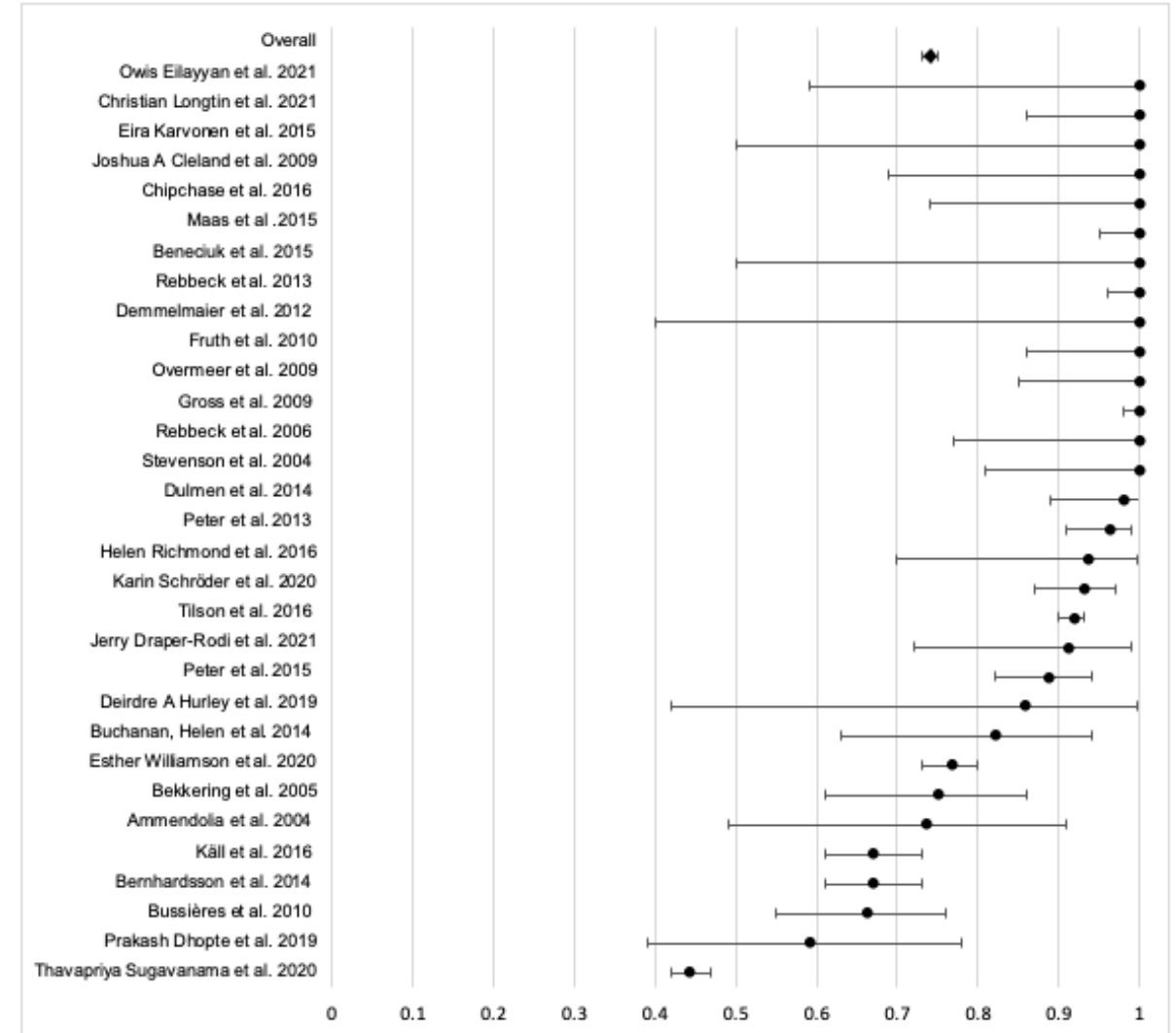


Gaid, D., Eilayyan, O., Ahmed, S. *et al.* Enrollment, adherence and retention rates among musculoskeletal disorders rehabilitation practitioners in knowledge translation studies: a systematic review and meta-regression. *Implement Sci Commun* 5, 51 (2024). <https://doi.org/10.1186/s43058-024-00585-w>

Enrollment, Adherence, and Retention Rates (cont'd)

- Adherence rate → educational meetings only
- The overall adherence rate was 74%.
 - 73% for before-and-after studies
 - 78% for controlled trials

Fig. 3 Forest plot of the adherence rates.

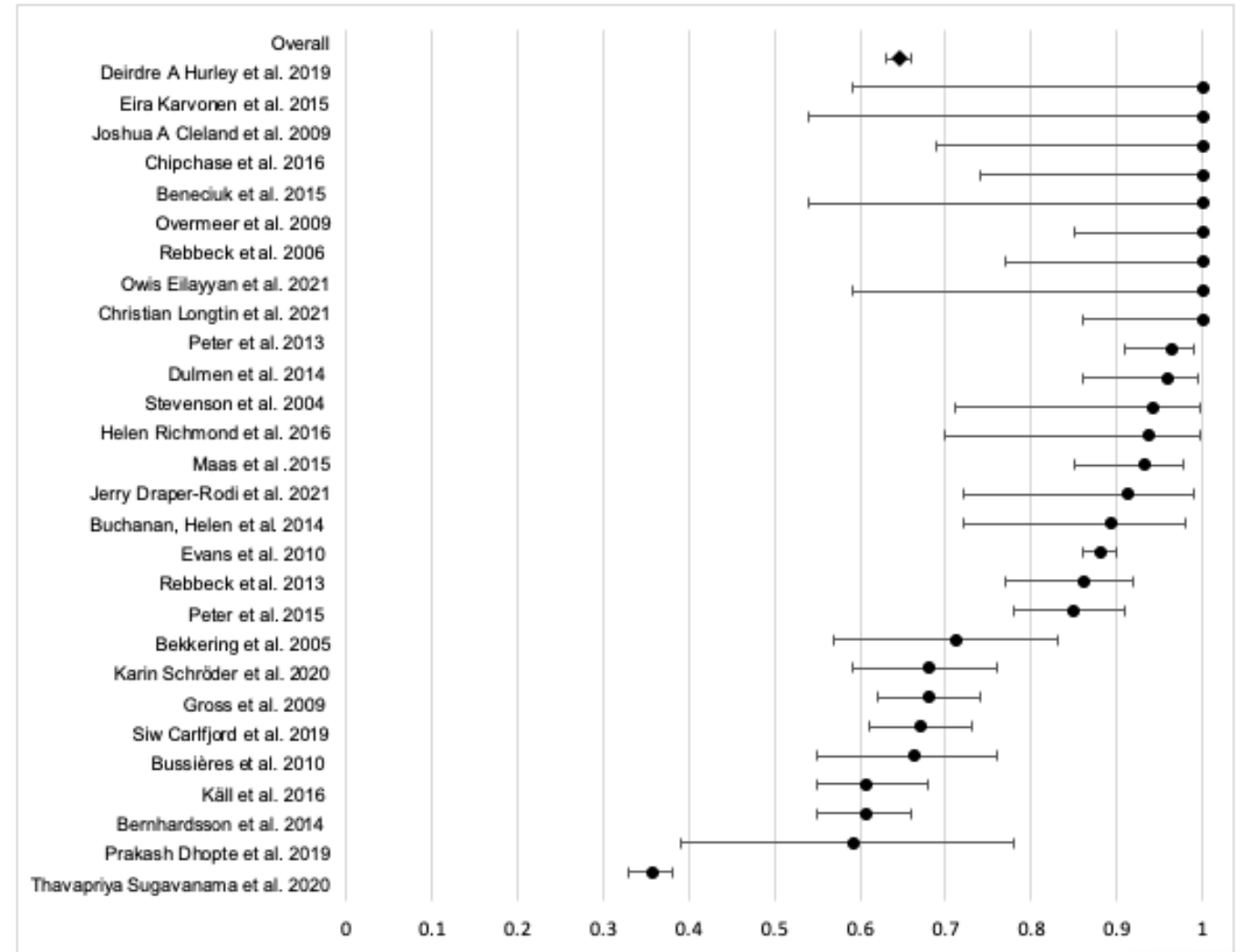


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Enrollment, Adherence, and Retention Rates (cont'd)

- The overall retention rate was 65%.
 - 49% for before-and after studies
 - 81% for controlled trials
 - 80% for interventions groups
 - 81% for control groups

Fig. 4 Forest plot of the retention rates.



Gaid, D., Eilayyan, O., Ahmed, S. *et al.* Enrollment, adherence and retention rates among musculoskeletal disorders rehabilitation practitioners in knowledge translation studies: a systematic review and meta-regression. *Implement Sci Commun* 5, 51 (2024). <https://doi.org/10.1186/s43058-024-00585-w>

Factors Influencing Enrollment Rate

For study-related factors:

- ↑ 12% more than one study group
- ↑ 11% more than one follow-up point
- ↓ 12% for before-and-after studies compared with controlled trials

For practitioners-related factors:

- ↑ 33% practitioners managing BP and ↑ 19% for managing NP

As for KT intervention-related factors:

- ↑ 16% KT intervention online (virtually)
- ↑ 19% educational meeting for more than 4 h
- ↑ 29% educational meetings more than one time
- ↓ 38% two to three interventions and ↓ 16% more than three interventions



Factors Influencing Adherence Rate

For study-related factors:

- ↑ 27% measuring more than two professional outcomes
- ↓ 11% more than one follow-up point
- ↓ 13% implementing a study for over 6 months

For practitioners-related factors:

- ↓ 11% practitioners managing BP and ↑ 13% for managing NP

As for KT intervention-related factors:

- ↑ 16% educational meeting for more than 4 h
- ↑ 12% educational meetings more than one time
- ↑ 29% higher when delivering the KT intervention for a long period (e.g., up to 6 months)
- ↓ 22% two to three interventions
- ↓ 32% KT intervention online (virtually)



Factors Influencing Retention Rate

For study-related factors

- ↑ 31% more than one study group
- ↑ 14% measuring more than two professional outcomes
- ↓ 31% for before-and-after studies compared with controlled trials
- ↓ 22% implementing a study for over 6 months
- ↓ 28% more than one follow-up point

For practitioners-related factors:

- ↓ 12% practitioners managing BP

As for KT intervention-related factors:

- ↑ 13% educational meetings more than one time
- ↑ 29% higher when delivering the KT intervention for a long period (e.g., up to 6 months)
- ↓ 31% two to three interventions and ↓ 13% more than three interventions
- ↓ 35% KT intervention online (virtually)



Findings



This review supported that designing studies should be:

- More than one group of practitioners with a controlled arm
- Shorter period (less than 6 months)
- Only one follow-up point
- Single intervention for a short period of time (1 month up to 6 months)
- Conducting a long educational meeting (more than 4 h) for more than one time

Explanation

- Difficulties for practitioners to commit to their regular work schedule over a long period
- Limited practitioners' ability to report outcomes over multiple follow-up points
- Concentrate on a full-day workshop offered multiple times (i.e., long-term engagement) is better than having several short meetings during their busy working day



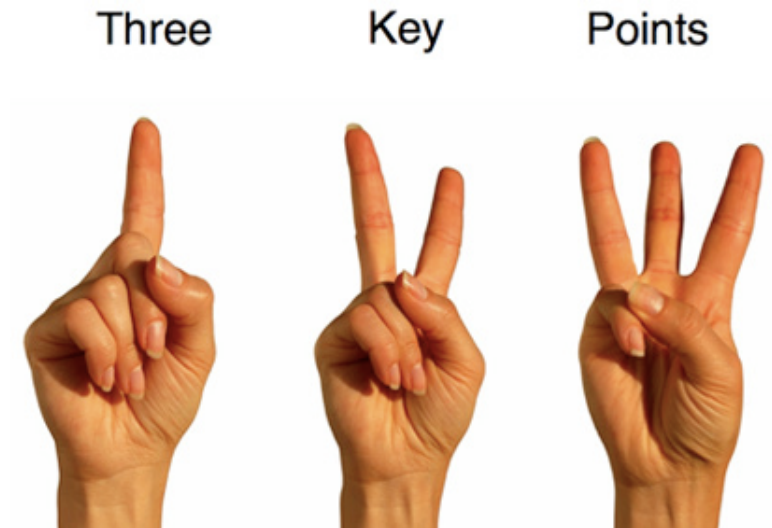
Limitations

- Several studies failed to report on the number of practitioners who were eligible to participate in the study.
- Unable to consider other variables that could be influential
 - practitioners' educational backgrounds
 - practitioners' beliefs in KT interventions
- Unable to assess the impact of each type of KT intervention separately on the feasibility rates.
- Restricted to KT interventions targeting MSDs rehabilitation practitioners only.



Take-Home Message

- ✓ Single intense KT intervention (e.g., high frequency, short duration) was more appealing for practitioners.
- ✓ Interventions which require less effort and less commitment and which save participants' time have higher feasibility rates.
- ✓ KT researchers should consider the time required from healthcare practitioners to participate in KT studies to maximize the feasibility rates → increase the generalizability of their findings.



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Q&A

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