## **REVIEW**



# Addressing power imbalance in research: exploring power in integrated knowledge translation health research



Jacqui Cameron<sup>1,2\*</sup>, Anita Kothari<sup>3</sup> and Renee Fiolet<sup>4,5</sup>

## Abstract

**Introduction** Integrated knowledge translation (IKT) is a knowledge translation framework that focuses collaboration between researchers and knowledge users (KUs) to generate research findings. KUs can be policymakers, clinicians, or those with lived experience who partner with researchers. While advocated as an approach that democratizes research and reduces power imbalance between researchers and KUs, it is not known if the implementation of IKT by health researchers actively addresses power imbalances. The aim of this study was to review research using an integrated knowledge translation approach to explore how power is addressed within these research studies. By looking broadly at how the studies addressed/described/discussed/dismantled power we explored examples of when this was done well and not so well, exposing the assumptions sometimes made by researchers.

**Methods** We drew from systematic review procedures combined with a modified critical discourse analysis (CDA) lens. We searched Medline, PsycINFO, CINAHL, Scopus, Social Science Database, SocIndex and Google Scholar for English language studies that focused on IKT and power. Data were extracted on study characteristics and a modified CDA which included questions in relation to power (*e.g., description of power, phrases used to describe power, evidence of power dynamics, strategies for addressing power imbalances*) and end user engagement (*e.g., Did they ask KUs how they wanted to be involved? Did they engage in reflection with KUs? Did they discuss dissemination strategies with KUs*).

**Results** Eleven studies were eligible after screening 381 titles and reviewing 40 full-text studies. The use of IKT to address power varied significantly, revealing both positive examples as well as some missed opportunities to address power imbalances from study inception to dissemination.

**Conclusion** Revisiting the use of IKT to examine how power is defined, shared, and managed in relationships with KUs could provide valuable insights. Using a CDA framework to explore these dynamics would indeed address the nuances of power in research contexts. Future research should focus on developing strategies to effectively implement IKT to address power imbalances, leading to research that has a better chance of being useful, usable and used in practice.

**Keywords** Integrated knowledge translation, IKT, Power, Critical discourse analysis, Knowledge user, Shared-decision making

\*Correspondence: Jacqui Cameron jacquic@uow.edu.au Full list of author information is available at the end of the article



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## **Plain English Summary**

One of the difficulties of doing research is understanding and managing the power difference between researchers and knowledge users (community members/those impacted by disease/service providers). When power imbalances are not managed well in research teams, the results may not be as beneficial to its knowledge users because it may not be relevant, and further, power imbalance can negatively impact knowledge users' experiences of engaging in research. Some researchers are trying to ensure there is more equality in research and explore how to address power differences within their own work.

There are different ways to help researchers collaborate with knowledge users. One method of working with knowledge users in research is called Integrated Knowledge Translation (IKT), which started in Canada in the 1990s. IKT involves everyone in the research process working together from the start and is focused on ensuring that those who will be using research also inform its production.

The aim of the current study was to review studies using an integrated knowledge translation approach to explore how power is addressed within these research studies. By broadly examining how the studies addressed, described, discussed, and dismantled power, we were able to identify various examples of effective and ineffective approaches. In the eleven papers we assessed, power was not always addressed or explained well. When it was, discussion about power was found in the background of the paper, or in some sections of their work rather than a strong focus of the work, suggesting there are many opportunities for researchers to better address power.

## Introduction

Integrated knowledge translation (IKT) is a collaborative research approach that emphasizes the engagement of various knowledge users, including health researchers, practitioners, policymakers and those with lived experiences of health conditions, through a research partnership [1]. The goal of IKT is to bridge the muchdiscussed gap between research generation and its practical application, making research outcomes more relevant and usable for knowledge users by responding to knowledge user needs [2]. Knowledge users (KUs)anyone who can use the research findings-can be policymakers, clinicians, managers, community members or those with lived experience and they partner with researchers to collaboratively produce research. Ultimately, IKT mitigates research waste by generating relevant and usable research for KUs and supports improved health services and policies for healthier communities. IKT shares similarities with and differences from other partnered research approaches, like community-based participatory research, and it is likely that the various traditions have influenced each other as they evolved. A study that compared IKT with engaged scholarship, Mode 2 research, co-production and participatory research found several key similarities: authentic engagement, a focus on processes that reflected a collaborative research orientation, similar core values and a need for extensive resources [3]. The traditions differed in terms of partner role, historical roots and purpose [3]. For example, community-based participatory research aims to empower a community, while IKT, derived from the health services and policy sector, prioritizes implementation.

A critical aspect of IKT is power dynamics, as power plays a significant role in shaping both the process of research and the utilization of its findings [4, 5]. Unproductive power dynamics might jeopardize the potential benefits promised by using IKT approaches [6, 7]. Power, as understood in the research context, is not a neutral or static element but one that is multifaceted and highly relational.

While we recognize the numerous theoretical frameworks and descriptions of power in the broad literature [6-10], in this paper we lean on the idea of members of an IKT research team, or the environments in which they operate, as having power to, power over or power with each other [11]. Our contemporary understanding of power has evolved significantly since political theorist Robert Dahl's [12] definition, which described power as the ability of one person to compel another to act against their usual inclinations. Despite these advancements, the inherent implications of power remain unchanged [10, 13]. Power can be wielded for benevolent purposes or for dominance. When one population dominates another, especially if the dominant group holds a higher social status or is seen as the knowledge authority, significant societal issues can arise [14]. The Tuskegee syphilis study exemplifies the severe consequences of power misuse, highlighting the dangers when those of lower social status are subjected to the whims of the powerful (power over) [15]. Power imbalances in research are particularly concerning when studying marginalized or vulnerable populations, as in the example above. Emerson's [16] description of power imbalance as the reliance of one entity on another for resources and goal achievement, where greater dependence equates to less power, is present and problematic in the research enterprise, as populations often depend on researchers for accurate and relevant findings. Traditional Western research methods exacerbate this by positioning researchers in power-e.g., training in scientific methods and research practices [17]—making the relationship with knowledge users transactional and extractive [18]. For the purpose of this paper, we are informed by Partzsch's 2016 [11] work highlighting an understanding of power through acknowledgement of three separate concepts; having power over another could mean some team members hold the potential for control and manipulation of the research agenda or process. This further reinforces traditional domination of those who feel oppressed and can be thought of as similar to having discursive or dominant power. Yet when there is potential to share *power with* those that are most impacted by the research-most often the KUs-to work alongside each other in setting common research objectives (for example), relating to the notion of epistemic power [19]. Within this context, power to might be construed as power to make decisions within the research partnership. We see power balance as being aligned in the research process when there is an equal distribution of power as needed; an imbalance of power is aligned to research practices where there is power over some of the research team [11].

One of the fundamental issues in IKT is the distribution of decision-making authority among the research team. Traditionally, academic researchers control the research process, from formulating questions to interpreting results. IKT aims to decentralize this authority by actively involving (non-academic) KUs in the research process to build on collective expertise (power with) [20]. However, even in well-intentioned collaborative settings, power asymmetries can persist. One of the main challenges in IKT is ensuring that all KUs have an equal voice in decision-making. Heaton et al. [21] argue that collaborative research often maintains implicit hierarchies, particularly when academic researchers retain control over final interpretations and dissemination of results. Dunn et al. [22] also explore the power dynamics within IKT and emphasize that power imbalances can arise when there is a lack of clarity about who holds decision-making authority at various stages of the research process. For example, academic researchers may feel that they are best equipped to interpret data, while KUs may argue that they have the contextual knowledge necessary to apply the findings. These tensions highlight the need for ongoing negotiation and communication within the team to ensure that power is shared equitably throughout the research process. Power imbalances can undermine the principles of IKT, as the research may end up reflecting the priorities of academic institutions rather than those of the knowledge user community who will use the knowledge [23].

One of the key goals of IKT is to democratize the research process by involving KUs who are typically excluded from academic research, such as community members, certain front-line health care practitioners, or policymakers [2]. However, achieving meaningful participation is not always straightforward, as power imbalances can persist even when KUs are formally included in the research process [2]. The literature emphasizes the importance of ensuring that participation in IKT is not merely tokenistic but involves genuine engagement and co-ownership of the research process [24]. In many cases, KUs may be invited to participate in research but are not given meaningful opportunities to influence its direction [25], resulting in superficial engagement, where KUs feel that their voices are not truly being heard. To address this issue, IKT teams need to conscientiously create spaces where all team members, including KUs, can contribute to the research process in a meaningful way [25].

Similarly, Rycroft-Malone et al. [26] highlight the importance of addressing structural barriers to participation in IKT. They argue that power imbalances are often reinforced by institutional norms and practices that privilege certain types of knowledge or expertise over others. For example, academic institutions may prioritize quantitative data and scientific methods, while practitioners or community members may value experiential knowledge or qualitative insights. These differences in knowledge paradigms can create power imbalances that marginalize some KUs, making it difficult for them to fully participate in the research process. Similarly, patient engagement in healthcare research, while often framed as empowering, can be constrained by institutional norms that prioritize biomedical expertise over experiential knowledge [27]. To mitigate these imbalances, Pratt and Hyder [28] suggest that IKT researchers should adopt more reflective and flexible approaches to knowledge generation that recognize the value of diverse types of expertise. Further, funding agencies might create opportunities for KUs to initiate research projects and hold research funds (power to) [26]. Achieving this requires a commitment to powersharing and a willingness to challenge the institutional norms that perpetuate power imbalances.

This review adopts an approach that acknowledges our own position of power and privilege. We agree with the sentiment of Crosschild and colleagues [23], p5] that 'A researcher needs to recognize their position within the academy that prioritizes Western knowledge and

knowledge production methods'. We therefore provide our own position statements as authors. JC is a social work academic at an Australian University, with an interest in the application and development of integrated knowledge translation to support domestic and family violence research findings and practice. Her research is mostly community based and always collaborative which champions the voices of frontline practitioners and those with lived experience. RF is a lived-experience researcher working in domestic and family violence and trauma research. RF is a non-Indigenous Australian woman who identifies as an anti-oppressive, antiracist, intersectional feminist researcher committed to decolonising traditional research practices. AK is a professor at a Canadian university who has focused on integrated knowledge translation in her research, in her research practice and in teaching for the last 20 years.

This review acknowledges that power dynamics play a vital role in shaping the research process within the framework of integrated knowledge translation. Despite its potential to promote more equitable research practices, IKT faces several challenges related to power dynamics but there is limited evidence that considerations of power are incorporated into IKT processes [29]. To uncover important insights for thinking about power in relation to IKT, the purpose of this review was to answer the following question: *How do researchers implement the integrated knowledge translation framework to address power imbalances in health research*?

## Methods

This study drew from elements of the systematic review process combined with elements of a modified Critical Discourse Analysis framework. Critical Discourse Analysis (CDA) is a qualitative approach used to analyse how 'discourses construct, maintain, and legitimize social inequalities' [30, p116]. It is like Discourse Analysis (DA) in that it examines how language is used [31]; however, CDA places a stronger emphasis on the role of power in the analysis which makes it an appropriate method for this review.

A detailed analysis of language in CDA is meant to detect trends, frameworks, and tactics that disclose

hidden beliefs and power dynamics. CDA has been used in several settings to analyse the role of media and drink spiking [32], housing and homelessness policy [33], and alongside traditional systematic reviews [33, 34]. Mullett [30] provides a step-by-step approach for the application of CDA to systematic literature reviews. We have adopted a modified CDA framework to inform our data extraction and data analysis to explore the role of IKT and power. The modifications included, not conducting a full CDA accordingly to the framework, but rather using elements of the framework to help guide our thinking during data analysis, for example, we looked for 'purposeful language use' in regard to the word power, we looked for 'hidden power dynamics' that were in the literature but not specified. This allowed us to uncover and challenge the power imbalances in the literature. We also had extensive group discussion at each stage of the analysis process.

## Search strategy

We conducted searches of seven databases: Medline Ovid, PsycINFO, CINAHL, Scopus, Social Science Database, SocIndex and a supplementary search of Google Scholar. An example of the search string for Scopus (Table 1) is provided below. All remaining search strings are available from the authors.

The total number of results (n = 381) was imported into Covidence [35] review management software. After screening and removing duplicates, we included 35 studies for full-text review. Title and abstract screening were conducted blindly by JC and RF. All authors participated in the full-text review, and conflicts were resolved by discussion. The final number of included studies (n = 11) was then sent for full data extraction. A copy of the PRISMA diagram is provided below (Fig. 1).

#### Inclusion/exclusion criteria

The review included studies that focused on: IKT, the use of IKT in health research, and the concept of power in IKT. Studies that did not clearly reference either IKT or power were excluded. A complete list of the inclusion/exclusion criteria is available in Table 2.

Search 1	Scopus
APSTRACT only coarch, 10 Recults	

ABSTRACT only search: 19 Results

(ABS ("Integrated knowledge transfer") OR ABS (ikt) AND ABS (power) OR ABS (equity) AND NOT ABS ( empower\*) AND ABS ( health)) Title/Abstract/Keyword Search: 36 Results

(TITLE-ABS-KEY ("integrated knowledge translation" OR ikt) AND TITLE-ABS-KEY (power OR equity AND NOT empower\*) AND TITLE-ABS-KEY (health))



Studies awaiting classification (n = 0)

Fig. 1 PRISMA

	Relevant/inclusion criteria	Irrelevant/exclusion criteria	Exclusion criteria For Full TXT RX in covidence
Study focus (intervention/exposure)	Papers referring to IKT Focus on use of IKT in health research Focus on power in IKT Integrated knowledge mobilization (KMBb)	Knowledge translation Knowledge mobilization (unless referring to IKT) Implementation science Knowledge transfer Not health Wrong IKT No mention of power	Wrong study focus (e.g. not focus on health IKT and power)
DATA (comparator/context)	Empirical studies Quantitative studies Qualitative studies	Prevalence studies Epidemiology/Epidemiological studies Study protocols (e.g. RCT/review) Guidelines or framework	Wrong study data (e.g., prevalence study; guidelines; framework)
Study participants (population)	Humans Adults Children	Exclude non-human	Wrong participants (e.g. non-human)
Study interventions (intervention/exposure)	Interventions in health Implementation of IKT in health	Non-health interventions No evidence of IKT implementation	Wrong interventions (e.g., no interventions or practices on IKT)
Study settings (study characteristics)	Health Hospital Community health NGO health setting	Non-health setting Community setting Disaster health NGO setting not health	Wrong setting (e.g., not health)
Publications (outcome)	Research papers Research reports Systematic reviews Scoping reviews Thesis dissertations Commentary if includes relevant data	Letters, editorials, commentaries, periodicals, conference abstracts, art works, news updates, speeches Books reviews Books and book chapters Missing abstracts Conference abstracts	Wrong publication (e.g., book or book chapter, study protocols)
Language of publication (other)	English	Titles and abstracts in a language other than English	Not English manuscript
Publication date (other)	2024–2014	Pre 2014	Pre 2014

#### **Data extraction**

We modified the Covidence [35] data extraction template to include study characteristic relevant to a modified CDA. The data for each study included similar data characteristics such as author, title, location, number of participants, study design, duration, recruitment and data analysis. We also included a coding framework modified using the Mullet [30] approach to critical discourse analysis. This coding framework included questions in relation to IKT (e.g. description of IKT, how was IKT implemented); questions in relation to power (e.g. description of power, phrases used to describe power, evidence of power dynamics, strategies for addressing power imbalances) and end user engagement (e.g. Did they ask KUs how want to be involved? Did they engage in reflection with KUs? Did they discuss dissemination strategies with KUs).

All members of the review team participated in developing the coding framework, which we piloted before finalising. To achieve this, we all extracted data from the same paper using the modified CDA coding framework. We then met to finalise the CDA coding framework and incorporated it into the data extraction template. A copy of the data extraction including the modified CDA coding framework is provided in Table 3.

Once extracted data were exported from Covidence [35] all team members checked exported data to ensure the data extracted provided enough rich detail to address power in IKT.

## Results

The eleven studies covered different practice areas across health including: public health [36–40], aged care [41, 42], community [43] research partnerships or guidelines [44, 45] and youth [46]. The studies were from a range of countries including Canada (7), Australia (1), New Zealand (1), Germany (1) and Uganda (1).

In this section, we present the findings, detailing the key outcomes and insights derived from the modified CDA, focused on two areas: (1) Definition and approach to IKT, (2) Implementation of IKT and identification of power. This allowed us to explore how study authors

## Table 3 Data extraction

Reviewer initials	
Date of extraction	
1	Identification
COVIDENCE ID	
Authors	
Title	
Abstract	
Keywords	
2	Study setting
Location of study (i.e. country)	
# of participants (total)	
Participant characteristics	
3	Study design
Aim or objectives	
Research question Did knowledge users <sup>a</sup> help develop the RQ?	
Study design (quant/qual/mixed) Did knowledge users help design the study?	
Study duration	
Study recruitment Did knowledge users inform recruitment process and/or actively involved in recruitment?	
Number of study sites	
How much did knowledge users contribute to data collection? (e.g. develop focus group schedules, develop in-depth interview schedule, survey questions etc., co-facilitate these data collectior methods)	ı
4	Study ethics
How were ethical issues addressed?	Reviewer comments
5	Data analysis
What data analysis method was used? Did they include end users in the data analysis? How?	
6	Modified CDA
Description of IKT	Reviewer comments
How was IKT implemented in the study?	Reviewer comments
Description of power	Reviewer comments
Did they ask knowledge users how want to be involved?	Reviewer comments
Did they engage in reflection with knowledge users?	Reviewer comments
Do they say anything about the themes/results identified and discussed with knowledge users?	Reviewer comments
Did they discuss the dissemination strategies with knowledge users?	Reviewer comments
What individual words and/or phrases are used to describe power?	Reviewer comments
Is there evidence of analysis of power dynamics? If yes, describe	Reviewer comments
Is there evidence of identifying strategies for addressing power imbalances? If yes, describe	Reviewer comments
How did they frame the interaction with end users? ( <i>i.e. advise, consult, collaborate, partnership</i> )	Reviewer comments
What are the missed opportunities in relation to addressing power?	
General/summary comments	

<sup>a</sup> Defined as those who would be able to use research results to inform their decisions: clinicians, managers, policy makers, patients/families and others with lived experience

defined and implemented the IKT framework, how power was managed and defined, and how the authors acknowledged the role of power and responded accordingly.

#### Definition and approach to IKT

Those embracing IKT were likely to work and share decision-making with KUs throughout the research process, aligning with the definitions of IKT presented by the authors in the set of included studies. Some authors started early in the research process by bringing together KUs and other stakeholders to discuss problems and the research direction [36, 39, 41]. Several articles recommended involving KUs who can apply the research in settings, such as health, through policy or practice change [40, 43].

One author mentioned the aim of making research more relevant and usable through IKT [37]. Often authors described using an IKT approach in conjunction with other approaches, such as the Person-Based approach [38], the Behaviour Change Wheel [45], Community-based Participatory Research [36], and Systems Thinking [43].

The processes described in the articles report varying levels of KUs engagement by a range of different KUs. In several projects, a core group became part of the research team [39, 41, 44, 46] while other KUs/stakeholders were consulted at key points in the research process. For example, Ramage et al. [40] used a four-stage research process where KUs team members were incorporated in stage 1 (start up and planning) and stage 3 (intervention protocol development) and other diverse stakeholders (KUs informants) were consulted during stage 2 and stage 4 workshops and interviews.

As authors described their IKT strategy, it became clear that some authors employed the process itself as an instrument. That is, they were interested in using IKT to achieve concrete ends that responded to knowledge user needs. For example, Lawrason et al. [38] developed a physical activity intervention using an IKT approach. In contrast, other authors mentioned meaningful engagement or social justice [41, 42, 45] as one of the drivers of the IKT.

## Implementation of IKT and identification of power Description of power

The concept of power was inadequately described, with all papers lacking any explicit definition of power. The studies predominantly focused on, however, managing power imbalances and emphasized the importance of shared decision-making [38, 42, 43, 45] or advocating for a partnership approach in research [38, 42, 43, 45]. For example, one study [40, p8] stated that an implicit power imbalance 'exists between people with the lived experience of receiving healthcare or research interventions (e.g., a patient) versus those delivering it (e.g., healthcare provider or researcher),' yet doesn't identify what power means, nor what it signifies in the context of research. While several studies recognised power differences as a significant issue that needed to be minimised [36, 37, 39, 40, 43], the fundamental nature of power itself remained under conceptualised.

## Words and phrases used to describe power

There were not a lot of words or phrases describing power, but most studies used phrases to describe managing or dismantling of it (even though this was more in their intention than in the strategies they used). There were words and phrases such as prevent/manage/reduce power imbalance, making it clear that power imbalance was important to most project teams. However, as evidenced by Ramage who asserted it is 'important to avoid reinforcing power differentials' [40, p11]. A few studies mentioned 'equal', 'shared contributions' or 'shared decision-making' as fundamental to addressing power, this was often referred to in background statements, rather than how the project team managed to incorporate these actions into their research. There were exceptions to this, with Lawrason et al. [38, p1] providing a notable example of what good power-sharing can look like 'Using the SCI IKT Guiding Principles to guide partner engagement and involvement ensured that design partners had shared decision-making power in intervention development'.

Although terms like 'partnership' were frequently mentioned, genuine evidence of such partnerships was often lacking. For instance, some might argue that because Hande et al. [42] did not compensate their advisory group members, the 'partnership' was not genuine, as only the research team received appropriate resourcing for their contributions.

While several papers discussed 'shared decision making,' a clearer understanding and more examples would have been beneficial. For instance, Lawrason and colleagues [38, p5] advocated for shared decision making in their abstract's conclusion but noted that 'the recommendations from end users were incorporated as best as possible for both content and delivery'.

Interestingly, there was a mix of terms and phrases used to describe the knowledge users, e.g. 'stakeholders', 'service users' and 'end users' were used in the studies reviewed here. This might be reflective of the different partnered research traditions that have evolved and contributed to integrated knowledge translation [3].

## Analysis of power dynamics

Discussions about power dynamics are more prevalent in the background sections of papers rather than in the descriptions of methods or reflections on processes. Baba and colleagues [46, p5-6] address power to some extent in their study when describing the methods used in their CommuniKIDs project 'We conducted youth and parent workshops separately to ensure all workshop contributors felt comfortable, and to prevent any power imbalances between youth and adults during the workshops'. Strategies used to address power dynamics within study methods is an area that could be significantly improved in the articles reviewed.

## Evidence of identifying strategies for addressing power imbalances

While several small strategies were implemented to encourage participation, accessibility, and comfort, there could have been greater efforts to understand the KUs' preferences for building their research skills and their desired level of involvement in the process. However, Pozniak and colleagues [39] explained their attempts to minimise power imbalances with youth participants:

...by explicitly reassuring the participants that, there are no right or wrong answers - we just want to know what you think, and we attempted to follow their lead as much as possible by respecting their silences or wishes to explore certain topics over others. (Pozniak et al. p5).

Similarly, Ramage and colleagues [40] went to exceptional lengths to ensure access and comfort for the KUs on their team:

This included ensuring appropriate strategies to support people with aphasia (a communication disability) and people with physical disabilities (e.g., providing appropriate set-up of the workshop environment to optimise safety, comfort and interaction). (Ramage et al. p6).

## Engagement with KUs regarding results

Only a few of the studies explained how they used several different strategies to ensure the KUs were involved in the process of finalising results. For example, Ramage and colleagues [40] described using workshops as a process for checking the themes as they developed iteratively, and they also sent documents for amendment by the KUs.

The summary document was circulated to the co-production team members, who then worked through the many ideas and suggested changes identified through the stage 2 workshops. Collaborative decisions were made regarding the content of the protocol through facilitated discussions. (Ramage et al. p5)

The workshop facilitator iteratively summarised and confirmed ideas and outcomes to ensure accurate interpretation of knowledge user informant input. The workshops were audio recorded, and summaries were sent to all participants with the opportunity provided to amend the summaries. (Ramage et al. p5)

Pozniak and colleagues [39] described how they ensured 'trustworthiness' during both data collection and data analysis using triangulation methods.

The research team employed several measures to ensure trustworthiness during data collection and analysis. During the analysis stage, the diverse backgrounds of the research team facilitated triangulation. Parent investigators contributed significantly to theme development by identifying themes in the transcripts that resonated with their own experiences as well as the experiences of other parents they know through their multiple networks. Other members of the research team similarly confirmed that the themes generated by us resonate with the accounts they hear from other parents in their clinical and/or research work. (Pozniak et al. p5)

One study [36] used their Community Advisory Groups (CAGs) to discuss and interpret findings.

Once the qualitative interviews with members of each community were completed, additional meetings with CAGs were held to discuss and interpret findings. Individual interviews were triangulated with insights for the CAGs and existing literature. This triangulation helped in validating the insights gained from interviews and in constructing a more comprehensive picture of community dynamics and attitudes. (Fontaine et al. p.10)

Similarly, Baba and colleagues [46] engaged their 'youth advisors' to review the feedback and revised their results.

The updated populated results summary was presented to advisors for review. (p6) With the youth advisors, we discussed the revised populated results summary and CommuniKIDS User Tip Sheet. The instructions for researchers, was not reviewed with youth based on advice of the patient partner, family partner, and the youth facilitator to avoid, overloading, the session, and to allow the youth sufficient time to discuss the populated summary and user tip sheet. (Baba et al. p7)

#### Dissemination strategies with KUs

Engagement with KUs regarding the dissemination strategies was variable; again, some studies use their advisory group or committees to assist with this task [37, 39, 42, 44].

Our research study sought to build on this work by: (i) seeking the perspectives and opinions of disabled Canadian children and youth as well as their parents; and (ii) engaging a group of disabled youth as research collaborators in designing, carrying out and disseminating research. (Pozniak et al. p2)

## Reflection, humility and developing trust with KUs

Lawrason and colleagues [38] used IKT combined with a 'person-based' approach to develop trust by using shared decision-making, and described involving partners 'throughout' the research process. Similarly, Klamroth and colleagues [37] conducted pre-and-post activities before sessions. Hande et al. [42, p3] described an activity that was reflective in its description 'During these sessions, we delved more deeply into the expertise of each stakeholder'. They also focused on the positioning of lived experience voices within the team as described below.

Such activities, which intentionally centred the lived experiences of our advisors, strengthened relationships and built trust within and across the SALTY team, slowly shifting normative research structures towards collaboration and mutually impactful learning and co-creation opportunities. (Hande et al. p6)

A few studies such as Ramage et al. [40] Jull et al. [44] and Pozniak et al. [39] reflected as a team on the IKT process as described in the example below. This reflective process was used to support the engagement and develop trust with KUs.

Throughout this stage the co-production team reflected on their plans to help ensure it remained feasible, and feedback on processes and outcomes were welcomed. (Ramage et al. p3)

There were opportunities to address power dynamics that were missed. Engaging the entire research team in discussions about power and power imbalances would be beneficial, leading to a consensus on strategies to address these issues. Few studies evaluated the success of their implemented processes. While some researchers articulated a desire to share power, they often retained control over major project decisions. For example Ramage et al.'s [40, p11] study stated that the researchers were responsible for most of decision making because they were the ones spending the most amount of time in the project which appears contrary to claims of *'mutual respect and partnership'* principles being upheld. They fully acknowledged the limitations of co-production of knowledge.

Therefore, knowledge user informants provide knowledge and experience to inform the intervention but are not co-producers, as they do not share the power to make key decisions regarding the intervention design as the co-production team does (stages 1 and 3). (Ramage et al. p3)

Ramage and colleagues [40] had used a unique strategy of inclusiveness in that they had a lived-experience person from their co-production team record a video to share with KUs, encouraging them to use their voice during workshops.

Two of the include studies [36, 43] referred to the role of trust in relation to their relationship with KUs. Rarare and colleagues [43] described how they 'entrusted' the co-design elements of their studies to engage KUs to actively be a part of the process of implementation of the intervention.

Although there was limited evidence of projects involving all stakeholders from inception to completion, Shwed's [45] study indicated that:

Partners agreed on all decisions related to planning (e.g., research questions, study design), interview procedures, data analysis approach and interpretation, and dissemination of the findings. (Shwed et al. p835)

It was not clear from all the studies included if KUs were asked how they wanted to be involved in the research, i.e., from inception to conclusion of the study. Some studies such as Rishworth and Elliott [41] described a co-construction of knowledge with KUs which included development of the research question. They also engaged users through the workshop process. Similarly, Klamroth and colleagues [37] described involving their stakeholders during the design of the study, and the development of the evaluation plan. Fontaine et al. [36] described using meetings to define the roles and tasks of community members. While Lawrason et al. [38] incorporated IKT across all aspects of the study process including the planning, and development as well as activities to demonstrate the IKT approach. Baba et al. [46] provided examples of using feedback from each workshop to inform the next workshop and identify

improvements, however it was not clear that they directly asked KUs how they wanted to be involved. Pozniak et al. [39] adapted child-friendly approaches that recognised the need for flexibility when working with children.

## Discussion

As noted above, we combined elements of a systematic review combined with factors of CDA to address the role of power in research, specifically in relation to the application of Integrated Knowledge Translation (IKT) as a framework for knowledge translation. Drawing from the eleven included studies, we interpret the results in the context of existing literature, explore the implications of our findings, and suggest directions for future research. Our findings have potential practical implications, particularly in the application of IKT in health research. They can inform the understanding of power dynamics in research, ultimately leading to a richer comprehension of power's role in the collaborative production of health research.

We found that most studies used a similar definition of IKT and had a solid understanding of what it meant, however *how* the model was applied within research studies varied greatly, which is consistent with the broader literature [22, 47].

Our findings revealed no strong definition of power which may contribute to difficulties deconstructing it within research practices. This is consistent with other research [4] that demonstrates how power dynamics lead to unequitable representation regarding participation in research. Moreover we argue that a clear definition of power in the context of research is essential, as is the need for researchers and KUs to come together as a team to identify how they will collectively mitigate power differences in their collaborative research [48].

## Structural imbalances of implementing IKT

Findings suggested that project teams genuinely aimed to address power dynamics in their research. Despite strong intentions and thoughtful efforts, there are areas needing improvement. Managing power and equity in research requires genuine partnerships from the outset, rather than mere consultation or token collaboration [24, 49]. As per fundamental IKT principles, and to address equal decision-making, KUs should help shape research questions and objectives, co-create project protocols, participate in data collection and analysis, and guide the dissemination of research, especially communications relevant to the populations they represent [23, 50].

A few articles talked about recommendations to include KUs with authority to implement or influence decisions about health care, and consequently the team included a broad range of stakeholders, including community members. An enabling environment is one that ensures there is leadership clarity while also guaranteeing that collaboration remains a focus [51, 52].

Research teams must actively build their own capacity (including that of KUs and trainees) to work in partnership successfully. A critical first step is discussions to identify everyone's strengths and needs regarding involvement. Providing the necessary time and resources for KUs to undertake relevant training and education demonstrates a genuine appreciation for their contributions [53, 54]. Additionally, assisting KUs to lead research and publications, rather than merely contributing is vital. Finally, appropriate remuneration and recognition of their contributions are essential; neglecting these measures perpetuates power imbalances [55].

Until researchers are supported by a system that provided opportunity, time, resources and capacity to address power (through IKT and other mechanisms) from the beginning of the research process, there will still be gaps in capacity to do this effectively [53, 56].

Most studies we reviewed had a core group of KUs who were part of the team, and during the research process other stakeholders were consulted to gather additional input. However, there were gaps in engagement, where KUs were not always involved from the beginning nor at the dissemination end of the research. There was also variation on *how* IKT was used. Some used IKT as an instrument, others used in a different way, not as instrument, but as an engagement process, and as an endpoint mechanism. Understanding when and how KUs are best engaged for both useful outputs *and* equitable relationships is an area for future research.

#### **Capacity building**

To effectively address power dynamics in research, project leads and team members must critically reflect on their own power and positionality [23], considering its impact not only on project outcomes but also on the research process itself. It is crucial to move beyond merely acknowledging the importance of shared decision-making. Instead, there must be a commitment to building the capacity of all KUs to contribute meaningfully, and to fostering a research environment that is sufficiently safe and inclusive for their participation. We must acknowledge that many contemporary scientific methods and research practices are founded on frameworks that emphasise colonised ways of doing things, leading to imbalances in power distribution [17, 23].

## What does it mean for future work?

Based on our findings we have identified six suggestions for future work and consideration:

- 1. *Encouraging transparency*: Researchers should be encouraged to share their experiences, including challenges and failures, to foster a culture of transparency and learning in addressing power in research. This can help others avoid similar pitfalls and build on previous work.
- 2. *Journal policies*: Academic journals could play a crucial role by requiring researchers to include statements on how they addressed power dynamics and equity in their studies. This would ensure that these critical aspects are considered and reported.
- 3. *Word count limitations*: The restrictive word counts in academic journals can hinder comprehensive reporting on power and equity. Journals might consider offering supplementary sections or online appendices where researchers can provide detailed accounts of their efforts in these areas.
- 4. *Power dynamics in research*: Power is relational and context-dependent. Researchers should strive to create equitable relationships with their KUs from the planning stages of their projects. This can help navigate power imbalances and lead to more inclusive and impactful research outcomes.
- 5. *Sharing Power*: Emphasising the benefits of shared power can lead to better research outcomes. When power is distributed more equitably, it can enhance collaboration, innovation, and the overall quality of research.
- 6. *Encouraging reflection*: Researchers should be encouraged to reflect on their motivations and commitment to addressing power dynamics. This self-awareness can drive more genuine and effective efforts to promote equity.

## **Strengths & limitations**

The study's strengths include the novel approach of this review using an adapted and modified CDA which provides fresh insights when combined with the robust process of systematic reviews. Integrated Knowledge Translation (IKT) began appearing in peer-reviewed literature around the mid-2000s. Most studies being from Canada could be attributed to the prominence of the IKT framework there. The systematic review approach, despite the narrowed application, offers a comprehensive process, although we acknowledge we did not include all systematic review steps for example quality checks that would be part of a regular review process. We acknowledge that we did not complete a full CDA analysis. Finally, the narrow definition of health and power in our inclusion/exclusion criteria, requiring both the phrase IKT and specific discussions about power may have impacted our final included studies.

## Conclusion

This paper focused on addressing 'power' within the context of IKT. We found variable opportunities to address power imbalances while using IKT as a research framework. Based on these findings, we suggest it is time to reconsider the role of power in IKT, acknowledging that the approach might not organically address power imbalances between researchers and knowledge users (KUs). We also recognise that the research system, including ethics, funding, leadership, and colonization, contributes to the difficulty researchers face in addressing power imbalances. These findings can serve as a basis for future studies that revisit the use of IKT to examine how power is addressed in other areas. Using a CDA framework to explore these dynamics would help in understanding the nuances of power in research contexts. Future research should focus on empirically-developed strategies to effectively implement IKT to address power imbalances.

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#### Author contributions

JC: Conceptualisation; methodology; formal analysis (supporting); writing—original draft preparation (lead); writing—review & editing. RF: Conceptualisation (supporting); formal analysis (supporting); writing—review & editing. AK: Conceptualisation (supporting); formal analysis (supporting); writing—review & editing.

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#### Availability of data and materials

No datasets were generated or analysed during the current study.

## Declarations

**Ethical approval and consent to participate** Not applicable.

## Consent for publication

Not applicable.

#### **Competing interests**

The authors declare no competing interests.

#### Author details

<sup>1</sup>School of Social Sciences, Faculty of the Arts, Social Sciences and Humanities, University of Wollongong, Wollongong, NSW, Australia. <sup>2</sup>Department of Social Work, Melbourne School of Health Services, University of Melbourne, Parkville, VIC, Australia. <sup>3</sup>School of Health Studies, Western University, London, ON, Canada. <sup>4</sup>School of Nursing and Midwifery, Centre for Patient and Quality Safety, Institute of Health Transformation, Deakin University, Geelong, VIC, Australia. <sup>5</sup>Department of General Practice and Primary Care, University of Melbourne, Carlton, VIC, Australia.

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