Researcher practitioner engagement in health research: The development of a new concept

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Funding information
Department for Education and Learning, Northern Ireland

Abstract
The engagement of frontline practitioners in the production of research-derived knowledge is often advocated. Doing so can address perceived gaps between what is known from research and what happens in clinical practice. Engagement practices span a continuum, from co-production approaches underpinned by principles of equality and power sharing to those which can minimalize practitioners' contributions to the knowledge production process. We observed a conceptual gap in published healthcare literature that labels or defines practitioners' meaningful contribution to the research process. We, therefore, aimed to develop the concept of “Researcher Practitioner Engagement” in the context of academically initiated healthcare research in the professions of nursing, midwifery, occupational therapy, physiotherapy, and speech and language therapy. Guided by Schwartz-Barcott et al.'s hybrid model of concept development, published examples were analyzed to establish the attributes, antecedents, and consequences of this type of engagement. Academic researchers (n = 17) and frontline practitioners (n = 8) with relevant experience took part in online focus groups to confirm, eliminate, or elaborate on these proposed concept components. Combined analysis of theoretical and focus group data showed that the essence of this form of engagement is that practitioners' clinical knowledge is valued from a study's formative stages. The practitioner's clinical perspectives inform problem-solving and decision-making in study activities and enhance the professional and practice relevance of a study. The conceptual model produced from the study findings forms a basis to guide engagement practices, future concept testing, and empirical evaluation of engagement practices.

KEYWORDS
concept formation, focus groups, practitioner engagement, research personnel

1 | INTRODUCTION

Studies that are irrelevant to the evidence needs of frontline practitioners are often cited as a contributory factor to the research–practice gap (Bowen & Graham, 2013; Greenhalgh, 2017). Engagement of frontline practitioners in the research process is considered an effective strategy to overcome this issue. Those responsible for frontline care are often engaged by academic researchers in activities such as recruitment, data collection, and/or intervention delivery (Daniels et al., 2020). The value of practitioners' roles in key aspects of the research process...
is clear (Dimova et al., 2018; Marjanovic et al., 2019). Their skillset, personal characteristics, and existing relationships can support patients in the process of choosing to take part (Cronin et al., 2019; Lavender et al., 2019; Mann et al., 2014). Practitioners' clinical roles also make them well placed to deliver study interventions as part of routine care (Boase et al., 2012; Stockwell-Smith et al., 2015).

There is a risk, however, that when practitioners execute study protocol activities, a form of engagement known as a hired hand approach can be adopted (Daniels et al., 2020; Roth, 1966; Table 1). Hired hand research is experienced by those who follow a pre-formed plan laid out by the researcher (Roth, 1966). Examples demonstrate how, in such cases, practitioners are offered little opportunity to influence a study. As a result, their behaviors can affect a study's outcome, with the potential to threaten the quality of the data collected (Dyson & Dyson, 2014; Poate et al., 2003).

Conversely, practitioners’ engagement in research can be highly collaborative. A range of theoretical propositions such as participatory methodologies, Mode 2 knowledge production, engaged scholarship, and integrated knowledge translation have at their core a high level of cooperation between those who produce research and beneficiaries. The phrase “co-production of knowledge” is consistently associated with collaborative approaches. This term portrays a process through which researchers and research users undertake a study together (Antonacopoulou, 2010; Armstrong & Alsop, 2010). Co-productive approaches are driven by the need to engage with those likely to act on the knowledge that is generated (Nutley, 2010) with the specific goal of increasing the application of research through relevant, better quality studies (Bowen & Graham, 2013). An approach underpinned by these engagement principles (Table 1) demonstrates a clear endeavor to engage research users in all or most study activities, coupled with equality and power sharing across the research process (Beckett et al., 2018).

We scoped peer-reviewed publications for literature that empirically evaluated or described examples of frontline practitioner engagement by academic researchers (Daniels et al., 2020). The type of engagement observed often did not fully align with the defining characteristics of the engagement paradigm. Practitioners were more likely engaged in only some research activities, usually

| TABLE 1 | Comparison of the characteristics of the “hired hand” approach and the engagement paradigm |
|---------|--------------------------------------------------------------------------------------------------|
| **Hired hand approach (Roth, 1966)** | **Engagement paradigm (Bowen & Graham, 2013)** |
| **Who** | **Who** |
| Hired hand: those assigned a task within a study by the researcher | Knowledge user: those who will act on the knowledge generated by a study |
| **Why** | **Why** |
| Achieve researcher’s goals | Co-production of knowledge |
| **Activities** | **Activities** |
| Assigned tasks (e.g., participant recruitment or data collection) | Researchers and knowledge user collaboratively make decisions on: |
| No involvement in: | • The research question |
| - The study design | • Study design |
| - Decisions about how the study is carried out | • Data collection approaches |
| - What will be done with the research after it is produced | • Outcome measures |
| **Characteristics** | **Characteristics** |
| Hired hand: | Knowledge user: |
| - Feels no ownership of the study | • Has a genuine and equal partnership with a researcher based on mutual respect |
| - Adheres to a rigid plan | • Shares decision-making power |
| - Might have a desire to make a creative contribution but any suggestions are ignored | • Skills and knowledge of equal value to researcher’s skills and knowledge |
| - A pre-formed plan means they cannot openly introduce variations which may make the study more meaningful for them | |
| - Has little or no opportunity to express any intrinsic interest in the outcome | |
| **Outcomes** | **Outcomes** |
| Restricted outputs by hired hand | Generates relevant research |
| Deviations from the assigned task | Multidirectional learning |
| Causes a study to take longer to conduct | |
| Likely to introduce dubious data and interpretations into the process of analysis | |
recruitment, data collection, and/or intervention delivery. In these cases, there was, however, evidence to suggest that the practitioner’s role had resulted in positive effects for the study, clinical practice, and/or practitioner development (Boase et al., 2012; Bullen et al., 2014; Campbell et al., 2015; Eriksson et al., 2013).

Notably, our review found inconsistency and variation in the terms used by authors to refer to the form of engagement we had observed. It could be argued that this activity aligns somewhat with the concept of stakeholder engagement, but as a broad term is not specific to or often inclusive of frontline practitioners (Camden et al., 2015; Concannon et al., 2012). Engagement with all user groups is advocated within a research study to address different realities and perspectives as each group brings different motivations, expectations, and cognitive and emotional perspectives to the research process (Rycroft-Malone et al., 2016). However, strategies are required that specifically address variations in the engagement needs of each user group (Henderson et al., 2014). We, therefore, identified the need to develop a theoretical concept specific to this form of practitioner engagement by researchers based in academic institutions. Defining a form of engagement that converges around one practitioner engagement by researchers based in academic institutions of each user group (Henderson et al., 2014). We, therefore, identified the need to develop a theoretical concept specific to this form of practitioner engagement by researchers based in academic institutions. Defining a form of engagement that converges around one specific term could open conversations and address current inconsistencies and limitations in the reporting of engagement practices (Daniels et al., 2020).

2 | METHODS

2.1 | Aim and objectives

The aim was to develop the concept of “Researcher Practitioner Engagement” (RPE) in the context of academically initiated healthcare research in the professions of nursing, midwifery, occupational therapy, physiotherapy, and speech and language therapy. Specifically, the objectives were to establish what constitutes the concept by identifying the attributes, antecedents, and consequences to both define and delineate it from other concepts, determine if the concept is deemed necessary, and confirm suitability of the concept label.

2.2 | Study design

RPE is poorly developed, poorly explained, and has a lack of defined parameters, therefore, is not easily discernible in the literature (Morse et al., 1996). The immaturity of the concept necessitates an approach that is not reliant solely on theory, but which enables experiential data to form part of the concept development process. Therefore, qualitative methods which allow for an inductive approach were used (Morse et al., 1996). The hybrid model of concept development (Schwartz-Barcott et al., 2000) was adapted to optimize the rigor and usefulness of the results. In a three-phase approach, theoretical strategies and qualitative methods were combined to produce outcomes based on both literature and empirical data developed from actual cases (Hupcey et al., 1996).

2.3 | Data collection

2.3.1 | Theoretical phase

Sources used in this phase were 10 instances of the observed phenomenon which had been identified in peer-reviewed publications via a scoping review conducted in October 2017 (Daniels et al., 2020) and one instance retrieved by repeating the search 6 months later (March 2018). These instances were detailed in empirical evaluations of practitioner engagement by academic researchers in the research process (n = 8) and in descriptive papers designed specifically to report an engagement example (n = 3). Definitions of the related concepts stakeholder engagement (Concannon et al., 2014; Deverka et al., 2012), practitioner researcher engagement (Brown et al., 2001, 2003), and engagement in healthcare (Norris et al., 2017) were identified during the literature search. As these sources referred to defining elements of practitioner engagement in research they were also used. Sources were transferred to and managed in NVIVO® (version 11, 2015). Using qualitative content analysis (Elo & Kyngas, 2008; Mayring, 2014), factors required for RPE to occur (attributes), conditions necessary before RPE can take place (antecedents), and outcomes of RPE (consequences) were extracted. Within each category, subcategories were inductively generated by grouping similar or related components and naming each with a representative label (Elo & Kyngas, 2008). This process was iterative as subcategories were revisited and recategorized through continual reflection and abductive inference (Krippendorff, 2013) and continued until all evident conceptual components were identified.

2.3.2 | Fieldwork phase

Using focus groups, perspectives of academic researchers and frontline practitioners with engagement experience were used to confirm, refine, expand and/or exclude the tentative attributes, antecedents, and consequences inferred from the theoretical phase. Audio-visual technology (Zoom©) was used to host all groups to enable sampling across the United Kingdom. Academic researchers were recruited via study invitations sent to research center leads at all Council of Deans of Health member universities in the United Kingdom (n = 84) with a request to snowball to colleagues who then self-selected against the study criteria (Table 2). The study was drawn to the attention of frontline practitioners through advertisements in profession-specific publications and through a strategic Twitter campaign.

Volunteers who met the study inclusion criteria were sent the theoretical phase findings for consideration 1 week before their scheduled focus group (Table 3). Facilitated by the lead researcher (N.D.), participants discussed their opinion on the relevance of each tentative concept component, necessity of the concept, and the concept label. Verbal discussions were transcribed and occurrences
of kinesic nonverbal communications such as head nodding were noted. Within NVIVO (version 11, 2015) verbal and nonverbal responses relating to all concept components were categorized as agree, disagree, partially agree, or silence. Frequencies within each category were calculated to indicate components that required further consideration where 100% agreement was not indicated. Using qualitative content analysis techniques (Mayring, 2014), patterns in reasons for confirmation, refinements, or elaborations of each concept component were identified. Participants’ views on the necessity of the concept and concept label were analyzed and reasons categorized.

### TABLE 3  Outcome of theoretical phase of concept development

| Attributes                                                                 | Antecedents                                                                 | Consequences                                                                 |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Characteristics that make it possible to identify that a situation or instance can be categorized as the concept under consideration | Events that are necessary before the concept occurring                      | Outcomes brought about by the concept                                         |
| 1. Engagement in study activities varies in level and type dependent on study need (Brown et al., 2003; Bullen et al., 2014; Norris et al., 2017) | 1. Identify appropriate practitioner with a positive attitude toward study, skills, and knowledge relevant to the research topic and shared goals with the researcher (Bullen et al., 2014; Campbell et al., 2015; Di Bona et al., 2017; Eriksson et al., 2013; Finlayson et al., 2005; Norris et al., 2017; Roll et al., 2013; Stockwell-Smith et al., 2015) | 1. Influences the research process (Bullen et al., 2014; Campbell et al., 2015) |
| 2. Values the contribution of researchers’ and practitioners’ perspectives, skills, and knowledge (Brown et al., 2003; Campbell et al., 2015; Deverka et al., 2012; Norris et al., 2017; Patterson et al., 2011) | 2. Development of a collaborative relationship (Albers & Sedler, 2004; Campbell et al., 2015; Stockwell-Smith et al., 2015) | 2. Integrates research and practice                                                                 |
| 3. Reciprocal relationship (Brown et al., 2003; Campbell et al., 2015; Norris et al., 2017; Patterson et al., 2011) | 3. Organizational support (institutional, managerial, peer) (Stockwell-Smith et al., 2015) | Positive changes to practice (Boase et al., 2012; Roll et al., 2013; Stockwell-Smith et al., 2015) |
| 4. Shared decision-making in relation to study activities (Brown et al., 2001; Campbell et al., 2015; Concannon et al., 2012; Deverka et al., 2012; Eriksson et al., 2013; Norris et al., 2017) | 4. Diagnose and address potential barriers to engagement (Albers & Sedler, 2004; Bullen et al., 2014; Campbell et al., 2015; Di Bona et al., 2017; Roll et al., 2013) | Practitioner contribution to the production of knowledge (Albers & Sedler, 2004; Di Bona et al., 2017; Roll et al., 2013) |
| 5. Two-way, ongoing, and responsive communication (Brown et al., 2001; Bullen et al., 2014; Campbell et al., 2015; Deverka et al., 2012; Eriksson et al., 2013; Norris et al., 2017; Roll et al., 2013; Stockwell-Smith et al., 2015) | 5. Dedicated practitioner time (Albers & Sedler, 2004; Boase et al., 2012; Bullen et al., 2014; Di Bona et al., 2017; Roll et al., 2013; Stockwell-Smith et al., 2015) | Evidence into practice (Roll et al., 2013) |
|                                                                          |                                                                                | Practitioner professional development |
|                                                                          |                                                                                | Gained knowledge (Campbell et al., 2015) |
|                                                                          |                                                                                | Developed research skills (Campbell et al., 2015; Di Bona et al., 2017; Roll et al., 2013) |
|                                                                          |                                                                                | Improved criticality and reflection in practice (Boase et al., 2012; Eriksson et al., 2013) |
2.3.3 | Analytical phase

The purpose of this final phase was to integrate the literature and empirical data (Schwartz-Barcott et al., 2002). This involved moving iteratively between focus group data and returning to data from the theoretical phase to ensure sound representation of each component before establishing the concept definition.

2.4 | Rigor

To establish validity through confirmation and enhance understanding of the concept (methodological triangulation), four academic researchers (Focus group R5) were not exposed to the outcome of the theoretical phase and instead were asked to identify the attributes, antecedents, and consequences of the concept solely from their experiences. This focus group was facilitated by a researcher (P.G.) who had not been exposed to the outcome of the theoretical phase. Triangulated data were mapped to the theoretical phase outcome to identify convergences and additional concept components, helping to establish validity both through confirmation and by enhancing understanding of the concept through completeness (Breitmayer et al., 1993; Risjord et al., 2009). Recruitment challenges prevented triangulation with practitioner participants. As academic researchers, and therefore “insiders” (Finefter-Rosenbluh, 2017) reflexivity was essential and ensured through critical self-reflection of our positionality (Berger, 2015), identifying any potential influences on the data collection and analysis and monitoring any potential effects through an audit trail of interpretations maintained in a journal. The journal was added throughout to the theoretical and fieldwork phases to record researcher interpretations and was a key tool in the analytical process. Member checking of key discussion points with all participants highlighted no disagreements with accuracy.

2.5 | Ethical considerations

Ethical approval was obtained from the Institute of Nursing and Health Sciences Research Governance Filter committee. Key considerations of study involvement, handling and privacy of data, and withdrawal procedures were communicated during the recruitment phase. Informed written consent included an agreement for audio and visual recordings of discussions.

3 | FINDINGS

Five attributes, five antecedents, and three consequences were identified in the theoretical phase (Table 3).

Seventeen researchers and eight practitioners met the study criteria and were available to take part in eight focus groups conducted between October 2018 and March 2019. Researchers represented universities across the United Kingdom, a range of academic roles and clinical backgrounds (Table 4). Practitioners represented occupational therapy, physiotherapy, and speech and language therapy. Despite multiple attempts, nurse and midwife practitioners were not recruited.

3.1 | Attributes

Academic researchers and practitioners unanimously agreed that RPE varies in level and type dependent on study need but also on the study design

the amount of involvement and engagement needs to be appropriate for what's happening, rather than it just being a kind of a push towards maximum involvement and engagement for the sake of it

AR12 (Focus group R4).

The importance of the perspectives, skills, and knowledge of both researchers and practitioners was confirmed, with researchers valuing what each party can offer

it's absolutely valuing and respecting the different things that people bring to the whole process

AR5 (Focus group R2).

it's the recognition of the skills that a researcher has, that a clinician may not and the skills that a clinician has in terms of the clinical insight, that the researcher may not

AR17 (Focus group R5; triangulation group).

Practitioners need to feel like their perspectives and contribution are not only valued, but as important as the researchers

a tendency for the researchers to think they're driving the project and that the practitioners are just supplying information and maybe their contributions are not as valuable

Pr8 (Focus group P3).

The importance of a practitioner's clinical perspectives to the design of a study was emphasized. This suggests that the concept attributes should be elaborated to ensure practitioner engagement is evident in a study's formative stages.

that's where I often feel most valued as a clinician, [protocol stage] because you're bringing that clinical knowledge...helps clinicians to feel that they've got a greater contribution to the actual research process

Pr6 (Focus group P3).
As researchers acknowledged, many have been clinicians themselves, but practitioners felt that current and specific knowledge of the clinical setting must be considered in a study protocol:

I don’t think they’ve [researchers] actually worked clinically for quite some time...there’s a few things they’d just assumed would happen and we were like—Oh no, it doesn’t really work like that anymore

Pr4 (Focus group P2).

...and you know the obstacles and the opportunities and what you’re facing day in, day out...that needs to be reflected when you’re thinking about a research proposal

Pr2 (Focus group P1).

| TABLE 4 | Characteristics of the fieldwork phase participants by focus groups |
|----------|----------------------------------------------------------|
| **Focus group** | **n** | **UK region** | **Role** |
| **Exposed to findings of theoretical phase** | | | |
| Academic researchers (n = 17) | | | |
| R1 (AR1, AR2, AR3, AR4) | 4 | England (n = 2), Scotland (n = 1), Northern Ireland (n = 1) | Academic role: Professor (n = 2), Lecturer (n = 1), Research fellow (n = 1) Clinical area: Physiotherapy (n = 1), Occupational therapy (n = 1) |
| R2 (AR5, AR6, AR7, AR8) | 4 | England (n = 4) | Academic role: Professor (n = 4) Clinical area: Podiatry (n = 1), Speech and language therapy (n = 1), Occupational therapy (n = 1), Nursing (n = 1) |
| R3 (AR9, AR10, AR11) | 3 | England (n = 3) | Academic role: Professor (n = 1), Associate professor (n = 1), Lecturer (n = 1) Clinical area: Nursing (n = 1) |
| R4 (AR12, AR13) | 2 | England (n = 2) | Academic role: Professor (n = 1), Doctoral researcher (n = 1), Nursing (n = 1), Speech and language therapy (n = 1) |
| **Not exposed to findings of theoretical phase (Triangulation group)** | | | |
| R5 (Triangulation group) (AR14, AR15, AR16, AR17) | 4 | England (n = 1), Scotland (n = 2), Northern Ireland (n = 1) | Academic role: Professor (n = 1), Reader (n = 2), Lecturer (n = 1), Midwifery (n = 1), Physiotherapy (n = 1), Occupational therapy (n = 1), Nursing (n = 1) |
| **Practitioners (n = 8)** | | | |
| Exposed to findings of theoretical phase | | | |
| P1 (Pr1, Pr2, Pr3) | 3 | England (n = 3) | Physiotherapist (n = 1), Occupational therapist (n = 1), Speech and language therapist (n = 1) |
| P2 (Pr4, Pr5) | 2 | England (n = 1), Wales (n = 1) | Occupational therapist (n = 2) |
| P3 (Pr6, Pr7, Pr8) | 3 | Scotland (n = 1), England (n = 2) | Physiotherapist (n = 1), Occupational therapist (n = 1), Speech and language therapist (n = 1) |

AR15 (Focus group R5).
When practitioners had not been engaged in these early stages, frustrations were voiced:

> it’s sometimes hard to see how the research is going to be relevant to practice, because the group of patients that they [the researchers] select is so small and the exclusions are so high, that it actually doesn’t really reflect the true population.

Pr8 (Focus group P3).

Researchers from the triangulation group (Focus group R5) also reported the value of early involvement. Co-working a protocol with practitioners enables the development of a clinically relevant research question. It also allows practitioners to develop a vested interest in the study, with a greater likelihood of follow-up on any recommendations made in their clinical practice:

> what you end up with, is something that is significant from a research point of view…but also has real significance for clinical practice as well.

AR15 (Focus group R5; triangulation group).

The suggestion that shared decision-making is an attribute of RPE was disputed by many. Both researchers and practitioners felt the "shared" element is neither feasible nor necessary. There was a suggestion made that instead decisions should be negotiated or reasoned. Both parties acknowledged that overall responsibility is afforded to researchers and, therefore, they may be required to take a lead in decisions:

> the researcher probably dominates, as opposed to it being shared...they are probably committing so much more...so they probably have time to be more involved...will have much more ownership of it and...in some ways that’s right and that’s how it should be, because somebody has to take overall responsibility.

Pr6 (Focus group P3).

However, some researchers agreed with the need for shared decision-making:

> decision-making should be shared in order to increase the buy in of the study from the practitioners. Because the more they’re [practitioners] involved, the more they are likely to support it and the more the study is likely to be successful.

AR12 (Focus group R4).

Practitioners stressed the importance of making decisions together at a study’s formative stages, giving them more ownership of the study design. But equally, it was important for practitioners to have the autonomy to make pragmatic decisions during the course of a study. Examples shared by practitioners related to their clinical knowledge such as the optimal time for scheduling of study interventions or data collection based on their understanding of patient’s clinical need or aspects of the clinical context. Practitioners felt that when their clinical perspectives were not considered in reasoning around these aspects of a study, impractical decisions could be made. These decisions could then jeopardize the validity of the data collected or the likelihood of patient participation. There was a sense that one party may be better placed to make a decision as one person’s set of skills or knowledge might be more relevant to a particular decision:

> researchers are very good around methods and kind of theoretical constructs and clinicians are really good at what actually works. It’s actually acknowledging that people have more of a right to talk about certain things...and their voice should be louder than, you know, the other person.

AR5 (Focus group R2).

The triangulation group (Focus group R5) did not refer specifically to “shared decision-making” but used phrases like co-production, working together, shared understanding, and soliciting agreement. Their clear focus when identifying concept attributes was on the importance of practitioner’s clinical knowledge to the research process and subsequent influence on a study’s quality and outcomes. Reciprocity was considered important to ensure the process is not one-sided in favor of researchers, so practitioners do not feel like they are “feeding the research machine” (AR12, Focus group R4). Additionally, although it was agreed that communication is essential, more specifically, practitioners appreciated open communication channels where they felt able to contact the researcher when required. From the triangulation group’s perspective, an open and responsive dialogue was seen to contribute to practitioner “buy-in” to a study. An element of ownership developed through the ability to openly communicate issues to the researcher and seek advice on how to act:

> you need to have that kind of solid relationship where you can be at the end of the phone to answer the questions that might feel quite small, but actually are fundamental to the project.

AR15 (Focus group R5).

This can be facilitated by the researcher ensuring a presence in the clinical environment to develop relationships:

> it [presence in the clinic] was so necessary to just secure that engagement and make my relationships really good... forming this relationship is an important part of this, rather than just always being at the end of the phone.

AR14 (Focus group R5).

The importance of reciprocity was confirmed through examples when practitioners had been asked to carry out a functional role such as data collection and questioned the benefit.
it can feel, as a clinician, that you’re really just providing the study population and it doesn’t feel reciprocal in terms of developing your knowledge and skills and potentially research capacity.

Pr6 (Focus group P3).

Although researchers in Focus group R5 (triangulation) did not use the term reciprocity, the importance of a “mutually beneficial process” was highlighted. Finally, the importance of a practitioner’s role in study dissemination was stressed, so those who might benefit are provided with the findings by practitioners engaged in the study.

the so what factor for practice should come from those who have engaged in the study...so once we have findings, they [practitioners] are the ones that say 'let's do this, let's put this into practice'

AR12 (Focus group R4).

3.2 | Antecedents

Participants’ views stemmed mainly from barriers and facilitators experience which gave insight into the conditions necessary for RPE. A predominant theme was the need for a culture in which research and healthcare practice are integrated and where research is recognized as integral to a practitioner’s role.

the whole sort of culture of research being fundamental to clinical practice is really, really important, because if the institution and the organization only ever sees it as an add on, then that sends out the whole wrong message to managers and to peers

Pr6 (Focus group P3).

Repeatedly, researchers reinforced their experiences of practitioners needing to prioritize clinical care above research activities. Practitioners who had been given dedicated time spoke positively of the contribution this made to their ability to engage with the research. Researchers reported making efforts to integrate research tasks into clinical workloads. However, practitioners highlighted how this was not always possible as research tasks are supplementary to their clinical role or sit outside of normal shift patterns. The practitioner’s attitude was considered important and specifically, their vision of the potential outcome of the study.

for me as a clinician being involved in research, is actually what impact is this going to make for me, in terms of my practice? So, it's being involved in research that's going to benefit those people that I'm visiting every day

Pr2 (Focus group P1).

if you can actually say this will result in this difference to these patients... I think that brings together a very different level of engagement from a practitioner

AR5 (Focus group R2).

it has to be something that is meaningful for you in what you do

Pr4 (Focus group P2).

Participants felt that researchers and practitioners are likely to approach this process with different motivations. Therefore, the requirement for a shared goal before RPE was disputed. It was more important that both parties are committed to exploring a topic, even if it is from different perspectives.

sometimes people do have a shared goal, but may have a different understanding of how you go to get there as part of the research process

AR2 (Focus group R1).

Although a collaborative relationship was seen to underpin the engagement process, it was not viewed as a necessary antecedent, predominately as the limited time available hampers the ability to develop relationships before a study. However, willingness to initiate and develop such a relationship is important, with the collaborative relationship being a consequence that paves the way for future engagement experiences.

3.3 | Consequences

Researchers in the triangulation group (Focus group R5) made explicit the influences practitioners’ clinical knowledge can have on the research process.

because I had taken on board what the practitioners had told me was their normal practice the findings were actually much more relevant, the data collection was much more robust

R16 (Focus group R5).

input from the clinicians definitely shaped the methodology...it definitely shaped the interpretation of findings

R15 (Focus group R5).

Generally, practitioner engagement in the research process was perceived to make the findings of a study more likely to be implemented in practice. However, there was a disagreement that this should remain a consequence. Some researchers viewed implementation as something very different, to be considered as an
additional endeavor, but one that RPE within a study could perhaps influence

if you start with engagement in the primary research study those relationships can be carried over to implementaton projects

AR11 (Focus group R3).

It was asserted that the ultimate findings of a study may take some time to emerge and so a more likely consequence is instantaneous changes or improvements to local practices. Practitioners described increased confidence in their clinical role, and this was also observed by researchers

I feel like I’m a better clinician for it
Pr4 (Focus group P2).

their confidence has been enhanced and they felt much more capable clinically

AR11 (Focus group R3).

being involved in research helps them [practitioners] to feel more like an expert than just doing the clinical practice

AR10 (Focus group R3).

Reference was made across focus groups to the contribution RPE can make to building research capacity both at the individual and team levels. Practitioners reported a ripple effect where benefits are observed by colleagues and students and a culture of engagement in research within a department can help to retain and attract staff. It was disputed that practitioners could develop research skills through this form of engagement and understanding and awareness of research were more likely outcomes. Opportunities for practitioners to develop dissemination skills through journal authorship or presenting at conferences can also be created. One researcher described RPE as a mechanism to develop evidence-based practitioners, helping them to see how research fits within their clinical role. Practitioners agreed that this engagement provided an opportunity to integrate research and practice, allowing them to use research-derived knowledge to reason and justify elements of their practice. In light of RPE being mutually beneficial, researchers highlighted their own development as an additional consequence, offering opportunities for them to learn more about the clinical area under study.

3.4 Establishing the need for this concept

In the main, participants agreed that the concept of RPE is necessary. Reasons to support this were categorized as (a) to improve engagement practices and (b) to legitimize this form of engagement. Comparisons were drawn with Patient and Public Involvement, citing the positive consequences that formally establishing and building a culture around this subgroup of research users had realized. Despite an overall sense that the concept would be useful to guide successful engagement practices and overcome potential barriers, there were some reservations. Engagement was viewed as integral to the work of one researcher who did not believe RPE needed to be extrapolated as a separate entity. But, it was also felt that engagement does not happen intuitively. Improving understanding could prevent researchers taking engagement for granted and highlight what needs to be addressed to ensure engagement happens in a meaningful way. Researchers with reservations, however, did recognize the benefits of thinking carefully about a practitioner’s role as opposed to merely demonstrating clinical input in funding applications. This was echoed by a practitioner who voiced the need for a culture where approval committees and funding bodies require explicit evidence of RPE. A definition was also felt important to facilitate consistency in engagement practices and language used, allowing for comparatives to be made, impact of engagement to be measured and an evidence base developed. Most agreed that the label “Researcher Practitioner Engagement” was representative of the concept and its components. Alternatives such as “partnership” were proposed but challenged as being overly formal whereas engagement was thought to represent the concept’s fluidity.

3.5 Outcome of the analytical phase

The experiential lens of participants enabled the concept components to be refined to their most salient elements and provide a sound representation of the concept of RPE. No element of the concept proposed in the theoretical phase remained unchanged; most components were refined or removed and one component initially proposed as a consequence became a defining attribute. The final concept components detailed in Table 5 were used to propose a tentative definition: “Researcher Practitioner Engagement is a mutually beneficial process, through which practitioners are engaged by researchers to actively contribute to the production of research-derived knowledge which is meaningful to their practice. Practitioners’ clinical perspectives, skills, and/or knowledge influence a study from its formative stages and, through open dialogue, are used to solve problems and inform decision-making in relevant study activities to optimize the clinical relevance of the study and its outcomes.” The outcome of the analytical phase was used to devise a conceptual model to diagrammatically represent relationships between the concept components and to optimize its usefulness in guiding RPE in healthcare research (Figure 1).

4 DISCUSSION

The concept of RPE responds to the concern that opportunities for practitioner engagement in research need to be realized (Marjanovic et al., 2019; McCormack, 2011; Pentland et al., 2011). It addresses
the view that those who provide clinical services should be included in studies so their skills and strengths are capitalized on to enhance study tasks (Cronin et al., 2019; Nelson et al., 2007). RPE’s central intentionality is to ensure a practitioner’s clinical perspectives influence a study and its outcomes. The value placed on practitioners’ experiential knowledge within this new concept mirrors a central component of the engagement paradigm. The key to this existing paradigm, however, is that research users and producers collaboratively make decisions in relation to all or most study activities (Bowen & Graham, 2013). But, from the perspectives of both researchers and practitioners within this study, this was deemed neither necessary nor feasible. The notion of shared decision-making was contested with researchers being clear that a study is ultimately their responsibility, a sentiment with which some practitioners agreed. Practitioners expressed the need to feel their clinical perspectives are of equal value to the scientific perspectives of researchers generally, and used to influence the research process, particularly at the formative stage. This was endorsed by practitioners as more feasible in light of other clinical priorities than alternatives that require them to take on greater responsibility and commitment. Early engagement with clinicians is essential to understand how the study can be integrated into current clinical workflow and the adaptations necessary to ensure a study is acceptable to the clinicians concerned (Topazian et al., 2016; Weinfurt et al., 2017). Although the ideal of co-production of knowledge is postulated, few reported examples of practitioner engagement by academic researchers conform to the characteristics of this approach (Daniels et al., 2020). Evidence to demonstrate the impact of co-production on the relevance and utility of a study is sparse, outside of participatory action research approaches. It is, therefore, difficult to create a strong argument that supports the ideal of engaging frontline practitioners in all or most study activities. This is not of course to say that this ideal should not be strived for. However, the challenges of doing so must be acknowledged, and feasible ways of achieving collaborative knowledge production recognized (Rycroft-Malone et al., 2016).

The researcher-initiated agency of this concept could be seen to contradict the egalitarian, bottom-up approach of participatory approaches, in which practitioner-initiated studies are advocated as most likely to produce relevant research (Blevins et al., 2010). Power imbalances could also pose a challenge to the success of collaboration (Brown et al., 2003; Rycroft-Malone et al., 2016). However, engagement in protocol design is considered a defining distinction of a collaborative approach (Nelson et al., 2007). Therefore, the requirement for practitioner engagement in devising the study protocol could contribute to flattening knowledge hierarchies. Tangible recognition of a practitioner’s perspectives in the study design could eliminate practitioner frustration when this does not occur (Blevins et al., 2010) and provide opportunity to ensure aspects of the study design are acceptable to all parties (Newington & Metcalfe, 2014).

### 4.1 Implications for practice

This new concept addresses, in part, the variable and inconsistent terminology used to describe this engagement activity, which has led to challenges when carrying out reviews in the engagement field (Concannon et al., 2014; Fransman, 2018; Malterud & Elvbakken, 2019). It adds to the somewhat limited theory available to guide engagement practices to realize outcomes that could positively impact the research–practice gap. Defining components are mirrored in related work conducted since, which also identifies key considerations when involving healthcare practitioners in the research process (Laustsen et al., 2020). Laustsen et al’s (2020) adaptation process model similarly emphasizes healthcare practitioners’ contentment at being led by the researcher but a clear desire to advocate for a project’s applicability, which subsequently strengthened their practice.

By proposing this new concept, it is anticipated that RPE will be recognized, begin conversations, generate new examples, and the

### TABLE 5 Outcome of analytical stage: The components of the concept “Researcher Practitioner Engagement”

| Attributes | Antecedents | Consequences |
|------------|-------------|--------------|
| (1) Engagement in study activities varies but always occurs in protocol design and dissemination stages | (1) Common vested interest in a study topic and its outcomes | (1) Improves clinical relevance of a study and its outcomes |
| (2) Practitioners’ perspectives, skills and/or knowledge influence the research process from the formative stages | (2) Initiation and forming of a collaborative relationship | (2) Practice development |
| (3) Mutually beneficial | (3) Organizational culture of integrated research and practice | (3) Research capacity building |
| (4) Open dialogue which facilitates clinically informed problem-solving and decision-making in relation to relevant study activities | (4) Realizing and addressing challenges within clinical context that could impact on Research Practitioner Engagement |

Tentative definition of the concept of “Researcher Practitioner Engagement”: Researcher Practitioner Engagement is a mutually beneficial process, through which practitioners are engaged by researchers to actively contribute to the production of research derived knowledge which is meaningful to their practice. Practitioners’ clinical perspectives, skills and/or knowledge influence a study from its formative stages and, through open dialogue, are used to problem solve and inform decision-making in relevant study activities to optimize the clinical relevance of the study and its outcomes.
concept then become further understood (Morse, 2017). Diagrammatic representation using a conceptual model allows components to be succinctly captured to communicate the essential elements to consider in engagement planning and allow for reflective consideration to ensure RPE has taken place. The model offers a framework from which empirical evidence can be generated to evaluate the relationships hypothesized between the variables considered relevant to RPE.

We hypothesize that RPE could prevent engagement practices from adopting a marginalized, hired hand approach, which has the potential to threaten the feasibility and quality of the research process and a study’s outcomes (Dyson & Dyson, 2014). Evaluations of recruitment practices within clinical trials have shown that when the understanding of a study is not in place, clinicians negatively perceive the study’s relevance to their clinical practice, which, therefore, affects who is recruited (Ziebland et al., 2007). Those who provide clinical services should, therefore, be included in the planning of studies as a strategy to reduce gatekeeping behaviors (Cronin et al., 2019). The clinical skills and strengths of practitioners can then be capitalized on to enhance study tasks (Morrison-Beedy et al., 2001; Nelson et al., 2007). Behaviors such as study referral are considered more likely if clinicians feel a sense of ownership, hold positive views of the intervention being evaluated (Thomas et al., 2015), and understand the methodology being used (Lamb et al., 2016).

Increasing the need to demonstrate a study’s impact means it is imperative researchers ensure findings can be utilized in practice. This necessitates a balance between rigor and relevance (Rothmore, 2018). Considering these as discrete requirements could create a barrier to knowledge derived from research fulfilling its intended function of providing evidence to inform healthcare practices and optimize patient care. Collaboration between researchers and practitioners is, therefore, essential to inject realism into study design (Pickler & Kearney, 2018) and represent the “real clinical world” (Patterson et al., 2010). Consequently, consideration of research relevance (i.e., external, social, and ecological validity) which is equitable to the consideration given to robustness and internal validity in a study’s design is advocated (Backus & Jones, 2013). Perhaps it is time to revisit Roth’s (1966) assertion that critical appraisal of how knowledge has been produced should include evaluating if a hired hand approach has been adopted and subsequent impact. Strategies adopted to assure clinical relevance in study design should be called upon to be transparent in reporting as a matter of course.

4.2 Methodological considerations

Perspectives of researchers and practitioners with engagement experience were used to confirm, refine, expand, and/or exclude the tentative attributes, antecedents, and consequences inferred from published literature. Several steps were taken to optimize the rigor of this study; however, challenges in recruiting practitioners limited the sample size and disciplines represented. Although fieldwork took place in the United Kingdom, theoretical examples were international, and the outcome can be considered in similar contexts.

5 Conclusion

RPE labels and defines a specific form of engagement of frontline practitioners by academic researchers who conduct healthcare studies. It articulates the principles required to help researchers strive to optimize a study’s clinical relevance, as well as providing
opportunities for practitioners to develop research capacity. This concept and its tentative definition provide a springboard to encourage researchers to actively and transparently demonstrate that current clinical knowledge has contributed to the knowledge production process. It legitimizes a form of engagement which empowers practitioners to contribute to producing knowledge which underpins their practice within the realities of a clinical workload while meeting professional requirements to engage with research as evidence-informed practitioners (Health and Care Professions Council, 2018; Nursing and Midwifery Council, 2015). By proposing this concept, we hope to open discussion on its potential for helping productive ideals, RPE may, thereby, optimize research outcomes and their utilization in practice.

ACKNOWLEDGMENT
This project was funded by the Department for Education and Learning (DEL), Northern Ireland.

CONFLICT OF INTERESTS
The authors declare that there are no conflict of interests.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Daniels, N., Gillen, P., & Casson, K. (2021). Researcher practitioner engagement in health research: The development of a new concept. Res Nurs Health, 1-14. https://doi.org/10.1002/nur.22128