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Clinicians' experience of the research ready grant program: just-in-time learning to facilitate regional research capacity

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Abstract

Background Research capacity building programs, such as the Research Ready Grant Program (RRGP), are important methods of engaging clinicians in research knowledge and processes. Understanding the experiences and perceptions of clinicians who engage with such programs is important, as they provide valuable insights into the design and approach of research capability building programs.

Methods Under the framework of the New World Kirkpatrick Model of evaluation, this study adopted a descriptive qualitative approach and used semi-structured interviews to explore the experiences of clinicians who engaged with the RRGP. The aims were to identify the components of the program that facilitate clinicians' capacity to participate in the research processes. One member of each funded research team from the RRGP 2022 cohort was interviewed ($n=6$). Interview transcripts were thematically analysed.

Results Thematic analysis found that RRGP provided just in time learning, leveraging current clinical issues to engage clinicians, and provide experiential learning which demystified research processes. In the regional setting, the RRGP allowed clinicians to think globally, but to apply research to their local setting.

Conclusion The RRGP provides a vehicle for change to facilitate learning and offers opportunities for clinicians to engage in research. Facilitating collaboration, quarantining time and space for research and balancing work, life and research time are important elements to consider when implementing research capability programs.

Keywords Research capacity building, Clinical research, Research ready grant program

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Background

Research capacity building programs have emerged as an important method for building individual and organisational research capability [1–3]. In the clinical space, research capacity and capability (where capacity is the time space and resources to conduct research and capability is the clinical skills and confidence to perform research) allow clinicians to engage with research relevant to their own area, driving local and broader change whilst reinforcing a culture of best practice [4, 5]. Thus, research capacity building is essential for safe, quality service provision.

Research capacity building programs typically involve informational and experiential learning, where participants are engaged in a series of research workshops and relevant projects where skills such as research design, ethics approval, data collection and analysis are learnt within a supportive structured program. Mentors support the learning experience, playing a vital role in capability and confidence building [6]. Ultimately, research capacity building programs designed for clinicians support authentic, experiential learning which connects clinicians with clinical problems [7].

Successful research capacity building programs in health have increasingly relied on collaborative models that integrate academic institutions with health services. These partnerships leverage shared resources, co-governance structures, and embedded research roles to foster sustainable research cultures [8]. Strategies commonly employed include structured training programs, mentoring, fellowships, and embedding researchers within clinical settings to bridge the gap between theory and practice [8]. The ESSENCE framework emphasises evidence-informed approaches, equity in partnerships, and the use of theories of change to guide program design and evaluation [9]. Measuring success in capacity building initiatives often involves tools like the Research Capacity and Culture tool and the Research Spider, which assess individual competencies, team-level engagement, and perceived barriers to research participation [10]. However, many programs still rely on descriptive or pre/post evaluations without standardised metrics, highlighting the need for more robust and generalizable assessment frameworks [10]. Generally, effective research capacity building programs are characterised by strategic alignment, mutual benefit, and a commitment to long-term capacity development across individual, organizational, and systemic levels.

Research capacity building in regional, rural, and remote healthcare settings is of particular importance. Indeed, 30% of the Australian population live outside of metropolitan areas [11], necessitating the need for innovative and effective healthcare in the regions. Strengthening the connection between practice and research is considered essential for low resourced areas, which face additional challenges in service provision, thus necessitating high quality services [12].

Research capacity building in regional and rural areas is essential for addressing health inequities and fostering locally relevant evidence-based practice. These programs aim to empower rural health professionals to engage in research that reflects the unique challenges of their communities, such as workforce shortages, geographic isolation, and limited access to specialist services [13]. Workplace-based training models, such as the Rural Research Capacity Building Program (RRCBP) in New South Wales, have demonstrated success in enhancing individual research skills, fostering interprofessional collaboration, and embedding research into clinical practice [14].

However, individual training alone is insufficient. Sustainable RCB requires structural supports, including organisational commitment, dedicated research roles, and partnerships with academic institutions [14, 15]. Embedding research units within rural hospitals has been shown to improve research culture and staff satisfaction, contributing to workforce retention [15]. Realist evaluations also highlight the importance of context-sensitive design, recognising that rural research thrives when supported by local leadership, flexible curricula, and community engagement [14]. Thus, RCB in rural settings is not only about skill development but also about creating systems that value and sustain research as a core function of rural health services.

While research capacity building programs are becoming more popular in bridging the gap between research and clinical practice, implementing such programs into health service organisations requires careful consideration. Therefore, this study aims to explore the experiences of clinicians participating in the RRGP in a regional setting, with the goal of identifying the components that facilitate clinicians' capacity to participate in research process.

The research ready grant program

This study relates to the RRGP, created and delivered by CQUniversity in partnership with Central Queensland Hospital and Health Service (CQHHS) and The University of Queensland Rural Clinical School (UQRCS) which ran annually from 2018 to 2023. The program encourages multi-disciplinary, team-based research projects and is available to all continuing CQHHS staff members. The RRGP is structured in two phases: a training package consisting of eight weekly educational sessions covering topics such as research ethics, proposal writing, literature reviews, among others. Table 1 provides an overview the education sessions which are delivered weekly.

Table 1 RRGP Educational topics by week

TOPIC: Understanding and Positioning the Research Question			**How this topic informs the project proposal**
Week 1	Introduction to the RRGP 30 min	Welcome on behalf of CQHHS, CQU and UQ Destination 2030 Overview of the RRP	
	Understanding the Problem Positioning the Research Question	Articulate the goals and objectives of your research project based on available allocated research question. Reflect on how the identified issue presents in your clinical context and describe how your team will address it. List the logical arguments you would use to demonstrate that your project is both important and relevant to your practice area and the broader health service.	• Clarifies the clinical relevance of the research problem • Connects the pre-determined research question to local practice context
TOPIC: Formulating a research question **Searching and reviewing the literature**			**How this topic informs the project proposal**
Week 2	Searching and reviewing the literature	Develop a search question using PICO and CKN frameworks. Learn how to produce an outline for the Literature Review that outlines a rationale/justification of how your team's project will fill any gaps, contribute to the field of research or contribute to existing or improved practice.	• Background (literature review)
TOPIC: Conceptualising the research design			**How this topic informs the project proposal**
Week 3	Research Design Various methods	Develop an understanding of research designs; Quantitative, Qualitative, Mixed methods so that your team can match your research question with the appropriate research design.	Project design • Methodological approach
TOPIC: Population/Participants			**How this topic informs the project proposal**
Week 4	Research Design Participants/ Population	Develop an understanding of population/participants: Who are they, where will I find them. Recruitment and consent process, Inclusion/ Exclusion Criteria and Potential for risk, burden and benefit to the participants	Project design • Participants/Population
TOPIC: Data collection			**How this topic informs the project proposal**
Week 5	Research Design Quant/ Qual: Sampling, sample size, power	Develop an understanding of sampling, sample size, data collection methods and tools. How will your team collect the data?	Project design • Data collection techniques
TOPIC: Data analysis			**How this topic informs the project proposal**
Week 6	Research Design Quant/ Qual: Data analysis	Develop an understanding of data analysis. How will your team measure, manipulate and/or analyse the information that you collect?	Project design • Data analysis techniques
TOPIC: Presenting your topic			**How this topic informs the project proposal**
Week 7	Elevator Pitch – present your project to the group	Develop an understanding of how to present your project.	Dissemination strategy • Project presentation skills
TOPIC: Ethical considerations			**How this topic informs the project proposal**
Week 8	Ethics and research	Identify where and how to access Human Research Ethics Committee (HREC) documents and other ethical issues related to your proposed study (risk, benefit, etc.). Understand the essential elements completing the HREC and Site Specific Assessment (SSA) as well how to assess the quality of a study	• Ethical considerations including code of conduct and risk management • Research integrity and practices to maintain integrity

To ensure learning is applied to relevant contexts, participants are asked to work on a self-identified research topic; the intent is that at the completion of the eight-week education, participants will have a fully developed research proposal. Each session is scheduled for a Thursday evening from 5pm to 8pm, to account for clinician hours. Participants attend each week either face-to-face or online. Sessions are structured around a one-hour lecture, delivered by a course facilitator. These lectures are iterative, and participants are encouraged to ask questions throughout. At the completion of the lecture, a short 20-minute break allows fact-to-face participants to meet with each other. The final stage of the evening is dedicated to supporting clinicians to develop a project; facilitators support candidates to apply the learned content to scaffold a research proposal. For example, in week 3, participants and facilitators will work through conceptualising the research design and consider strategies that they might apply to their project. Facilitators were academics who hold a Doctor of Philosophy from the participating universities and were hired on a casual basis at five [5] hours per week.

At the completion of the training, clinicians can submit their research proposal for assessment and compete for potential funding (Phase two). Funded projects are provided with a dedicated research mentor to support the clinician-led project through designated milestones such as ethics application, data collection and analysis, final report submission and publication. Funded teams receive $7,000 to execute their project under the mentoring of an academic, across a 10–12-month time period. Mentors are academic staff members who hold a Doctor of Philosophy.

The aim of RRGP is to connect clinicians with research in a way that is meaningful to their unit contexts and considers the regional location of the health service. While projects are often pilots or simple studies, the learning is designed to be experiential, context specific and highly relevant to participants work locations. The structure of the program aims to provide learning that is 'just in time' – an educational approach where knowledge and skills are delivered when they are needed, allowing learning to be applied to real-world challenges and situations [16].

Methodology

This study forms part of a suite of evaluations on the RRGP. To evaluate the impact and efficacy of RRGP, the New World Kirkpatrick Model [17] has been used, to evaluate the training program across four articulated levels.

1. **Level one- Reaction**: Engagement, relevance, customer satisfaction.
2. **Level two- Learning**: Knowledge, skills, attitude, confidence, commitment.
3. **Level three- Behaviour**: On the job learning, monitor, reinforce, encourage and reward.
4. **Level four- Results**: Leading indicators and desired outcomes [17].

This study focuses on evaluating level one of the Kirkpatrick Model, providing insights into the reactions, experiences, and satisfaction of clinicians in engaging in the program. As such, a descriptive qualitative approach was selected. Qualitative research allows for others to understand the world from the view of those experiencing the phenomena [18], with a descriptive approach focusing on answering questions of special relevance to a particular group, including their thoughts and experiences [19]. The qualitative descriptive design described by Doyle et al. [19] offers a structured approach to phenomenon without the need for a deeply theoretical content. As such, a qualitative descriptive approach within the New World Kirkpatrick model is a suitable design for the research aims. Within the research design, semi-structured interviews were selected as an appropriate method of data collection, as they allow for open-ended questions, and for deeper exploration of topics of interest. Semi structured interviews as flexible in structure, iterative and allow for deep exploration. They are often the sole source of data for qualitative studies [18]. The COREQ framework was used as a reporting guideline.

Table 2 Participant and clinical stream

Participants	Clinical Stream
Sally	Allied Health Professional
Emma	Allied Health Professional
Tony	Data Analyst
Eli	Registered Nurse, Senior leadership role
Aleisha	Registered Nurse
Sarah	Registered Nurse

Aim

The aim of this study is to gain a comprehensive understanding of clinicians' experiences of participating in a research capacity-building program (RCBP), and to identify the components of the program that facilitate their engagement in the research process.

Research questions

1. What is the experience of regional healthcare clinicians participating in a RCBP?
2. What components of the RCBP facilitate clinicians' participation in the research process?

Clinicians and recruitment

This study explored the experiences of clinicians who engaged in the RRGP in a regional health service within Queensland. Clinicians from the 2022 cohort, who were successful in obtaining funding for their research projects, were invited to share their experiences through one-on-one semi structured interviews. Six teams were funded in 2022; An email was sent to the six team leader of the research project asking for them to participate in the interviews, or to delegate a team member to participate. Six delegates responded and provided consent to participate in interviews achieving a 100% response rate from the 2022 funded teams. All participants were clinicians working in rural, remote, or regional settings who had participated in the 2022 RRGP, as described in Table 2 and 3.

Participation in this study was voluntary, and clinicians could withdraw at any time up until data analysis commenced. To encourage participation, a $30 gift card was provided as an incentive. Pseudonyms were used to protect the identities of the clinicians.

Table 3 Summary of themes and subthemes

Theme	Subtheme	Description
Just in Time Learning	• Demystifying Research	Research is delivered at the right time, in a way that enhances clarity and applied skills
Thinking Global and Acting Local	• Regional Capacity Building	Research training has wide application, but can be applied to local contexts for real world problems, with a focus on regional health services
A Vehicle for Change	• Previous Barriers • Opportunities Through Research Ready Grant Program	• Research training acts as a wider vehicle of change, allowing clinicians to view problems in new ways. RRGP supports learning by acknowledging barriers and opportunities.

Methods

A member of the research team (PE), an experienced researcher who holds a PhD, conducted semi-structured interviews with the clinicians. There was no existing relationship between the clinicians and the researcher. The interviews took place after the completion of the RRGP annual program, between March and April 2023. Interviews were conducted via Zoom, lasting between 30 and 60 min, and were transcribed verbatim. A different member of the research team manually checked and de-identified the transcriptions to ensure accuracy and confidentiality. The interview questions were purpose built, based on the New World Kirkpatrick Model and the research questions. These were refined by the research team prior to application and are provided as Supplementary file 1.

Analysis

Thematic analysis, as described by Braun and Clarke [19], was used to explore the qualitative data generated from the interviews. The analysis consisted of six phases: familiarisation with the data, generation of initial codes, search for themes, review of themes, defining and naming the themes and producing the final report. All transcripts were collated using Adobe Acrobat, and a data analysis tool was created based on the study questions and objectives. This took the form of a Microsoft Excel spreadsheet, to which data was extracted, coded, categorises and themed. Analysis was inductive in nature, where patterns, codes and themes emerged from the data rather than any predetermined lens [20]. The researchers were involved in the RRGP as facilitators, thus initial data familiarisation and coding/categorising were independently completed by three team members (PC, ALB, ASc) to reduce any risk of influence. These researchers iteratively coded transcripts, compared data segments, and refine categories to develop a draft thematic structure. To enhance trustworthiness, consensus is often reached through collaborative coding and discussion among research team members. This process involves independently coding a subset of data, then meeting to compare interpretations, resolve discrepancies, and agree on a coding framework [20]. As such, after independent analysis by the three authors above, a series of meetings were held with team members (PC, TF, ALB, LW, ASc, AS) to collapse and refine themes until final consensus was reached and validated. Such consensus-building not only strengthens analytical rigor but also mitigates individual influence [20].

Ethics

Ethical approval for this evaluation was obtained through CQUniversity Human Research Ethics Committee (HREC), approval number 0000023575, and Central Queensland Hospital and Health Service HREC, approval number HREC/2022/QCQ/80,422. All participants provided informed consent to participate and the project was conducted as per the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research.

Findings

The final themes are summarised as.

1. Just in time learning,
2. Thinking global and acting local and 3) A vehicle for change. Themes and subthemes are depicted in Table 1 below.

Just in time learning

A common experience of clinicians was the notion of just in time learning. Clinicians spoke of serendipitous timing, where the RRGP coincided with a research idea, current project, or a quality improvement cycle.

> *…because it was a pilot study, we saw an opportunity maybe to actually do a bit of research. And at the time, the research ready program was up for clinicians, so we decided to throw our [hat] in the ring and just see if we can get involved- Sally.*

Clinicians spoke of the alignment between clinical areas of need and the learning achieved through the RRGP as being complimentary to quality processes, acting to further improve work areas.

> *…I really wanted to understand that a bit more, just to make sure that basically in my role, it's doing quality and research activities, I suppose, to make*

sure that the services we're delivering are effective.- Emma.

RRGP facilitated opportunities to engage in clinically relevant projects with tangible outcomes. Moreover, clinicians expressed that RRGP provided additional, just in time learning (right learning at the right time) which supported higher learning courses. For example, clinicians described collaborating with a colleague who has a PhD, and their own concurrent learning in graduate certificates and master's course. The RRGP provided an opportunity to enhance this learning and networking and allowed the skills to cross pollinate into local projects of clinical need.

… [my colleague], who had a PhD, we were doing a partnership with [university], looking at the Grad Cert in mental health nursing, so we thought it was a very good option…And so the idea was, when the research program came up, we thought, well, here's a great opportunity- Emma.

RRGP allowed clinicians to capitalise on enhanced learning within their organisation and within the broader sphere of healthcare education.

Demystifying research

The RRGP allowed for the facilitation of skills and experience which led to improved understanding of the research process. The structure of the RRGP meant that clinicians were supported through a staged process of knowledge development. This involved developing a research question, reviewing the literature, defining a methodology, obtaining ethics, data collection, and other research milestones. Learning was experiential, where lectures coincided with tangible activities and outputs.

…it's quite a stressful process for people to put together a whole research plan and submit it and get feedback, and people get quite excited about that. It was certainly anxiety reducing, for sure. And I suppose there was a real sense of support from the people presenting that. There was that sense of direct engagement, which was really nice- Eli.

Clinicians explained that the interactive nature of the program and the support provided was particularly fruitful to learning. Mentors provided support in a structured way and were available as required. The learning and support gave a sense of research process familiarisation and facilitated outcomes such as data and publications. Access to financial support certainly enabled this.

…we did additional data collection with the seed grant funding and so we're currently writing that second paper up… That was quite exciting. And it helps that the hospital's[committee], the chair…he saw that we'd published, and he presented it at the [committee]…and got me involved to put together a working party to see how we can implement - Aleisha.

Learning, and the demystification of research, occurred across the duration of the program, but also across subsequent program cohorts. Some of the clinicians in this cohort had engaged in RRGP in previous years and noted that the learning was layered over time. They felt there was always new content to learn, and that continued engagement expanded their knowledge, skills, and competence.

…each year being involved; it's increased my confidence to the point that…I'm currently doing my Master of Research through [university]. And there's no way I would have even thought of doing that before I'd had those couple of years initially and gotten some confidence and an idea of what research actually is…- Aleisha.

Thinking global and acting local

Clinicians expressed their experiences of learning as providing global knowledge, with a focus on local clinical issues, making a difference to their regional service. This was facilitated by flexibility in the RRGP offering, and adaptability based on feedback and other events such as COVID-19.

COVID got in the way with a few things, but we could have just given up and said, oh, let's just not do it at all and wait for another two years or whatever…COVID be damned, let's just do it -Sarah.

Clinicians viewed research as being bigger than them as individuals and saw great value in its ability to make change in clinical outcomes. The exposure to research paradigms through RRGP led to profound insights into how research can impact upon practice and vice versa.

…we want to understand a lot more to help influence change and see what we can do because there is big higher objectives from the department to promote [services] a lot more – Sarah.

And

...we need more researchers at the bedside. I'm a nurse, but broadly speaking, we need more researchers at the bedside really understanding -Emma.

The link between research and evidence-based practice leading to good clinical outcomes was clearly described by clinicians. The need for the clinician's research to drive change on the ground was also articulated. Building research capacity was seen as good for the clinicians as an individual, but also beneficial for the organisation. Research was seen as a method of achieving organisational goals and needs and driving quality practice.

I do thoroughly enjoy it and it's good to see that we're using the data that we're pumping out for positive improvement in the organisation – Tony.

And

And it has alignments with our future plans in the organisation as well, with the medical school, the medical interns... Tony.

Regional capacity Building

RRGP was facilitated in a regional area of Queensland, Australia. As such, the nuances of regional healthcare were identified by clinicians. The consensus was that regional workers need to think outside of the box in order to solve challenges unique to regional and rural settings. They also recognised that there are many services in similar situations to them, and that the sharing of knowledge is an important way to raise the profile of regional health services and provide safe, quality services.

I don't think regionals should be sitting there saying we can't, because I have proven that we can, and not just with research, but also professionally. That's regional...Now with Teams and with everything else, we should be standing up and we should be saying, I'm going to get involved, because if we don't, then we don't have a voice, and that way nobody else understands our differences – Sally.

While tertiary institutions are often credited with having more equipment, skills, and knowledge, clinicians in this study believed that the depth and breadth of work they see provides unique opportunities and insights, helping to develop practice which encompasses a wide variety of skills.

A vehicle for change

The RRGP was delivered over six years between 2018 and 2023. The clinicians conveyed the program developed their sense of connection to research, the way they conducted their clinical practice, and the way they viewed evidence in their organisation. Being able to apply these skills to real life meaningful projects allowed the experience to be tangible, leading to academic outputs which developed their sense of belonging in research. This idea of change was expressed as overcoming barriers and seeing opportunities through participation in the RRGP.

Previous barriers to research

Firstly, clinicians in this research expressed the previous barriers they had experienced that inhibited their engagement in research. Clinicians cited many barriers to research, including a lack of collaboration opportunities and clinical workload taking priority.

Clinicians expressed a disconnect between their clinical work and what traditional university courses cover, articulating that when the research topics do not converge with real clinical problems, it can be difficult to engage with the subjects.

I hadn't done anything research apart from university...module in nursing research which kind of put me off research- Aleisha.

Of note was the difficulty in balancing work, home, and study life, as research skills and training were seen as additional to clinical work.

I don't know how you juggle that with a sort of sign on requirement, because people have lives and things are happening and I don't know how you do that. I think you have to have a balance- Emma.

Indeed, clinicians described their work as tiring, and consuming, expressing that high clinical loads take priority, especially in the regional context. After articulating these barriers, the clinicians described how RRGP allowed for opportunities in research.

Opportunities through the research ready grant program

With these known barriers in place, clinicians said that RRGP provided an avenue for supportive research by ensuring that both the participant and the health service made a commitment to the program, keeping them on track. The structure of the program was such that learning milestones corresponded with project milestones, providing both informative and experiential learning. The structure of the program also ensured that clinicians were held accountable for their projects at regular milestones and had the support of facilitators and mentors to enable their progression.

It seemed well rounded, the structure seemed solid, it seemed logical order- Tony.

RRGP also provided opportunities for networking, enabling collaborations and improved learning.

> *But you knew that person to go and see…that was the person that was a bit more into your need for your research, so that was good. That networking was really a great opportunity- Sally.*

The structure of the RRGP encourages multidisciplinary collaboration, opening opportunities for clinicians to build networks with other like-minded people interested in doing research. It helped to develop an ability to communicate with influence, and to use research to inform decision-making and practice.

> *I felt like might have got a bit dragged along in the process, but that's a good thing as well because it's pushed me out of my comfort zone, too- Sally.*

Clinicians expressed that RRGP was a welcome reprieve from the daily grind of clinical work. For many RRGP facilitated enrolment into formal research study, helped them to publish their findings and made them feel more confident in their research abilities.

> *And there's no way I would have even thought of doing [research] before [RRGP]. I'd had those couple of years initially [through RRGP] and gotten some confidence and an idea of what research actually is, that it's not scary and that it is what you make of it. Yes, it is frustrating at times, but it's not that scary- Sarah.*

Overall, clinicians reported a positive experience with RRGP, demonstrating that this structured program offered adequate support, space, time, and resources to build capacity and capability in clinical staff.

Discussion

This study set out to understand the experiences of clinicians engaging in the RRGP and identify the components which facilitated their ability to participate in the research process. The findings provide a rich understanding of how research capacity building programs (RCBPs) can function within health service structures to enact change whilst supporting individual and service level development.

Indeed, health services benefit greatly from clinician researchers. Integrating practice and service provision with evidence-based research ensures quality service delivery focused on safety and best outcomes [21]. Although clinicians are experts in their respective disciplines, research requires unique skills and experiences that many clinicians lack or feel unprepared for [22]. Therefore, investing in RCBPs, like the RRGP, offers opportunities to develop the health workforce in alignment with best practices. The findings of this study align with broader literature on clinician engagement in research, which consistently highlights the importance of structured, context-sensitive programs in overcoming entrenched barriers. Clinicians often face challenges such as limited time, lack of research training, and minimal organisational support, particularly in regional settings [23, 24]. Programs like the RRGP address these barriers by embedding mentorship, aligning learning with clinical relevance, and fostering a culture of inquiry. This is consistent with Matus et al. [25], who argue that research capacity building is most effective when it is collaborative, practice-based, and embedded within clinical workflows. Moreover, clinician-led research has been shown to improve patient outcomes, enhance job satisfaction, and contribute to organisational innovation [26, 27]. However, gaps remain in sustaining research engagement beyond program completion and in scaling such initiatives across diverse health services. The RRGP's success in fostering confidence and capability among regional clinicians suggests that similar models could be adapted more broadly to support a national strategy for clinician-led research, particularly in underserved areas.

This study demonstrates that participants of the RRGP found the program valuable, supportive, and provided opportunities for research learning. Well-designed, paced research interventions that leverage existing projects and problems are well-suited to build capacity and confidence, leading to high-quality safe services. In particular, RRGP runs within the health services yearly, over a period of 10–12 months. This timing appears to support learning which is timely, and the regularity of the program ensures that clinicians are able to anticipate the next cohort.

Just-in-time learning, defined as training that occurs immediately before its application [16] was a key component of the RRGP. Although often used for specialised task knowledge in a short timeframe [28], just-in-time learning is applied across various disciplines, from statistical modelling [29] to computer programming [30] and healthcare clinical simulation [31]. In this study, just-in-time learning allowed clinicians to access the knowledge needed to investigate clinical questions in situ, supported in a way that led to the immediate application of research skills not normally used in their usual patient care. This timely and supportive approach removed known barriers to conducting research, that clinicians have cited previously [32].

The RRGP program's experiential learning approach, mentorship, and grant funding opportunities facilitated deep learning for clinicians. The design and structure of the program scaffolded clinician's knowledge and skill

acquisition, catering to diverse research proficiency levels. This approach broke down the challenges associated with understanding and developing research projects. Clinicians were active learners, transforming their knowledge through interaction with learning materials and mentors in their research environment. This finding is consistent with other research capacity building programs [e.g., 33, 34]. The familiarity with the research process and 'learning by doing' enabled clinicians to gain clarity, solidify foundational research skills, and build confidence to continue researching in the healthcare settings, thereby delivering evidence-based practice.

Achieving research capability skills in regional areas poses specific challenges. Vast geographic spans, reduced staff and resources, and the depth and breadth of the clinical roles are known barriers to research education [35]. Nonetheless, research in rural and regional areas is crucial, as clinicians often need to work flexibly and creatively for service delivery [33, 36]. Regional healthcare workers engage with a wide variety of cases, enhancing their skill sets and broadening their clinical expertise [37]. This exposure to diverse medical conditions and scenarios leads to a more holistic approach to healthcare delivery, benefiting both practitioners and patients [38]. Thus, research in regional areas is of great benefit to local and global communities.

The RRGP facilitated and enhanced the notion of thinking globally and acting locally. Improving research skills has global relevance, and the projects that the RRGP facilitated addressed local problems, providing solutions that can be scaled up and out to communities in need. Indeed, feedback from RRGP clinicians highlights several critical themes essential for understanding and improving healthcare in regional and rural areas, particularly innovation. Clinicians consistently noted that the unique challenges of regional and rural healthcare require solutions outside conventional urban approaches. RRGP participants consistently demonstrated a can-do attitude, which is essential for overcoming environmental limitations and indicative of a broader cultural shift towards empowerment and self-reliance in regional healthcare.

Another valuable insight from the study is the recognition of the importance of knowledge sharing and collaboration among regional healthcare services. Clinicians acknowledged that many regional health services face similar challenges. By sharing knowledge and best practices, regional healthcare providers can collectively improve the quality and safety of their services [39, 40]. This collaborative approach not only raises the profile of regional health entities but also fosters a sense of community and mutual support [41]. The advent of digital communication tools, such as Teams, have further facilitated this knowledge exchange, allowing regional practitioners to connect, share, and learn from each other despite physical distances [42].

The results from this study also prompt a discussion on perception and recognition. Regional healthcare workers often feel overshadowed by their urban counterparts, who are typically credited with having more advanced equipment, skills, and knowledge [43, 44]. However, the RRGP clinicians challenge this notion, asserting that the comprehensive experience gained in regional practice is equally valuable. By actively participating in research and professional development, regional practitioners can ensure their unique perspectives and experiences are recognised and valued within the broader healthcare community.

The benefits of building research capacity in clinicians are well documented. Matus et al., [25] found that collaborative, practice-based research supporting excellence is most desired. Indeed, research capacity building programs, such as RRGP, offer simple yet profound solutions in connecting staff to research, driving practice and improving clinical outcomes. Embedding the RRGP has allowed change to be driven from within, ideally positioning the program for continued connection with research.

Limitations

This study presents several limitations that should be considered when interpreting the findings. Firstly, the sample size was small, comprising only six participants—one from each funded team in the 2022 RRGP cohort. While this ensured representation across all funded projects, the limited number may restrict the generalisability of the findings. Secondly, participants were self-selected and may have had more positive experiences or greater engagement with the program, potentially introducing response bias. Thirdly, the study focused solely on clinicians who received funding, excluding those who participated in the training but were not successful in securing grants. Their perspectives may have offered valuable insights into barriers to research engagement.

The study evaluated only the first level of the Kirkpatrick Model, reaction, without assessing longer-term outcomes such as behavioural change or research outputs, or cost benefit, patient outcomes, for example. Future research should explore these additional levels to provide a more comprehensive evaluation of the program's impact on clinical practice and organisational research culture.

Conclusion

This study aimed to explore the experiences of clinicians who participated in the Research Ready Grant Program (RRGP), and to identify the program components that enhance clinicians' capacity to engage in research

processes. The RRGP effectively provided just-in-time learning, leveraging current clinical issues to engage clinicians and offering experiential learning that demystified research processes. In the regional setting, the RRGP enabled clinicians to think globally while applying research locally, serving as a catalyst for transformative learning and research engagement. The RRGP serves as a pivotal platform for fostering change by facilitating collaboration, dedicating time and resources to research, and effectively managing work-life research balance. These elements are crucial considerations in implementing successful RCBPs. Insights gleaned from the RRGP underscore the resilience, innovation, and collaborative spirit of regional healthcare workers in Queensland, Australia. By embracing these qualities and continuing to share knowledge and experiences, regional healthcare services can effectively address their unique challenges and deliver high-quality, evidenced-based safe healthcare. Recognising the value of regional practice and actively engaging its practitioners are essential steps towards enhancing the profile and efficacy of regional healthcare services. Through ongoing support and development opportunities, like the RRGP, regional clinicians can further contribute to advancing healthcare practices and outcomes both locally and globally.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12913-025-13761-y.

Supplementary Material 1

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NIL.

Author contributions
Contribution Author Conceptualisation of the study PC, TF, LW, AS. Data collection PE, LR. Data transcription and checking AScoData extraction and thematic analysis PC, AB, A. ScoData validation TF, LW, AS. Writing of manuscript draft AB, PC, TF, AS, LW. Editing of manuscript PC, AB, LW, TF, AS, Asco, PE, LR. Finalisation and approval of manuscript PC, AB, LW, TF, AS, Asco, PE, LR.

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Data availability
The data that support the findings of this study are available on request from the corresponding author, [TF]. The data are not publicly available due to ethical conditions.

Declarations

Ethical approval
Ethical approval for this evaluation was obtained through CQUniversity HREC approval number 0000023575, as well as the Hospital and Health Service HREC, approval number HREC/2022/QCQ/80422. All participants provided informed consent to participate and the project was conducted as per the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research.

Consent for publication
N/A.

Competing interests
The authors declare no competing interests.

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