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The Double-Edged Sword of Translational Research: Stakeholder Perspectives of the Enablers and Challenges Implementing Anorexia Nervosa Treatment in Rural Health Settings

Ashlea Hambleton[1] | Verusha Kandar[2] | Jane Miskovic-Wheatley[1] | Sabina Vatter[1] | Daniel Le Grange[3] | Stephen Touyz[1] | Sarah Maguire[1]

[1]The InsideOut Institute for Eating Disorders, University of Sydney and Sydney Local Health District, Camperdown, New South Wales, Australia | [2]School of Psychology, University of Sydney, Camperdown, New South Wales, Australia | [3]UCSF Weill Institute for Neurosciences, School of Medicine, University of California San Francisco, San Francisco, California, USA

Correspondence: Ashlea Hambleton (ashlea.hambleton@sydney.edu.au)

ABSTRACT

Objective: To explore the translational research processes that emerged at the early phase of the implementation of telehealth-delivered family-based therapy (FBT) for young people with anorexia nervosa (AN) attending Australian rural health services.

Setting: Commencing mid-2019, five rural health districts across New South Wales (NSW) participated in the study.

Participants: Nine stakeholders, including study coordinators, clinicians and eating disorder coordinators, participated in a semi-structured interview during the early implementation of telehealth-delivered FBT.

Design: Inductive thematic analysis methodology was used to identify key research factors that enabled and challenged the implementation.

Results: The translational research improved patient access to evidence-based care, afforded health services access to clinical expertise, workforce training and supervision and assisted with meeting government directives of improving care pathways. However, the study and intervention implementation were challenged by research-related factors, including ethical and clinical dilemmas, the burden of stakeholders holding multiple roles and general challenges associated with integrating research into non-academic health services.

Conclusion: To optimise implementation and to bridge the access gaps particularly felt by rural families and health settings, translational studies ought to consider the enablers and challenges identified by the stakeholders.

Trial Registration: ACTRN12620001107910

Summary

- What this paper adds
  - This study is the first to explore the impact of research factors that emerged while implementing telehealth-delivered evidence-based eating disorder interventions in rural health services.
  - Research translation improved access to FBT, afforded rural health services access to clinical expertise and assisted with meeting service directives to deliver evidence-based treatment as close to home and as quickly as possible.
  - Fitting research into non-academic, rural health settings is challenged by embedding research processes alongside clinical pathways, creating ethical dilemmas and challenging stakeholders to hold multiple, at times conflicting and burdensome roles.

- What is already known
  - Anorexia nervosa is a serious but treatable illness. The most effective outpatient treatment for young people diagnosed with anorexia nervosa involves the family.
  - Access to evidence-based treatment is difficult for rural families who face disparities in service presence and availability, higher workforce turnover, poorer access to training and expert supervision, health system strain and resource issues.
  - Delivery of evidence-based care via telehealth has been proposed as a solution to access gaps for rural families, and preliminary evidence obtained from specialist settings supports its effectiveness.

[It's] still very apparent that … this massive void that exists between scientists and clinicians, that for most of the part, certainly in our area, seems to exist, with no great understanding of the needs of both.

[1]

Approximately 1.1 million Australians live with an eating disorder, and concerningly, 27% of these cases are among young people aged between 10 and 19 years of age [2]. Characterised by behaviours that interfere with appropriate weight gain or maintenance, a fear of weight gain and a distorted perception of weight or shape [3], anorexia nervosa (AN) is an eating disorder that impacts emotional, cognitive, social and physical well-being [4, 5]. The illness holds one of the highest mortality rates of all psychiatric disorders [6] as a result of medical and psychiatric consequences [7], and, when not effectively treated, can have a long-term chronic course [8].

Given that AN frequently begins during the critical adolescent development period [9], there is an impetus to deliver effective treatment quickly. Family-based treatment (FBT) [10] is the recommended treatment for adolescents with AN, and outcomes are most promising when treatment is delivered early in the course of illness [11, 12]. FBT is an intensive three-phased structured outpatient treatment requiring the attendance of all family members, with the ultimate goals of restoring the adolescent's weight, resuming appropriate eating, reducing disordered eating behaviours and returning the adolescent to their developmental trajectory [10]. To deliver FBT safely, clinicians must have specialist knowledge of AN via training and ongoing supervision [10].

Families living in rural areas experience inequities in access to FBT, with limited services available [13–15]. Further, rural health services face additional strains compared to their urban counterparts, such as higher staff turnover, limited access to training and professional development opportunities and often a less experienced workforce [13, 14]. Telehealth has been considered a potential bridge for geographic access gaps, and evidence suggests that the weight and psychological outcomes of telehealth-delivered FBT appear equivalent to face-to-face treatment [16, 17]. The COVID-19 pandemic exemplified how, through necessity, telehealth could increase accessibility [18] to eating disorder care [19, 20] and that it was generally well received and even preferred by some families [21]. Of note, this emerging evidence has been mostly obtained from specialist, academically linked research groups and little is known about how well telehealth-FBT would work in 'real-world' public health clinical contexts.

Translational research designs [22] offer a mechanism to evaluate and understand the effectiveness of telehealth-FBT [23, 24] outside of academic settings. Yet, embedding interventions via translational research is challenged by contextual factors, such as lengthy waiting lists, health system pressure and financial and staffing resource constraints [25]. Further, the procedural, logistical and regulatory processes relating to research implementation, including ethics applications and protocol development, patient recruitment and consent of 'research appropriate' cases, the burden of data collection, informatics and technology and funding deadline pressures [26] can be particularly challenging for under-resourced and clinically focused settings to manage and embed [27, 28]. Clinical leadership to support research implementation, the capabilities and research skills of health service stakeholders and the culture of the organisation implementing the intervention have been identified as crucial to implementation success or failure [22]. Implementation efforts are often subject to poor sustainability [29] and little is known about the fit of research-delivered care within non-research care settings [30].

An implementation study was recently completed evaluating the effectiveness of telehealth-delivered FBT for young people with a lived experience of AN attending Australian rural public health services [31]. The objective of the overall implementation study was to use telehealth to reduce the research practice, health outcome and treatment access gaps particularly felt by rural communities [32–34]. While intervention effectiveness, feasibility, adoption, fidelity and acceptability were used to determine the success of implementation [31], this paper aimed to explore the research-related processes that emerged during the early phase of the implementation of telehealth-FBT in rural health settings.

1 | Method

1.1 | Study Design

The qualitative study was conducted during the early implementation phase of a four-year feasibility study [35]. The study protocol was approved by a Human Research Ethics Review Board (HREC 2020/ETH00186), and the trial was registered with the Australian and New Zealand Clinical Trials Registry (ANZCTR #12620001107910). All participants provided written informed consent in accordance with the approved study protocol prior to

enrolment in the study. The consolidated criteria for reporting qualitative studies (COREQ) checklist [36] was used to guide the quality of reporting (see Appendix S1).

1.2 | Setting

New South Wales (NSW) is Australia's most populous state, with two-thirds of the 8.166 million people residing in the greater Sydney metropolitan region. The NSW public health system is complex, comprising primary, secondary and tertiary care services [37]. Geographically, the health system is divided into 15 health districts, with nine servicing rural and regional areas. Five rural health districts joined the implementation study, ranging from $246\,676\,km^2$ ($95\,242.14$ square miles) to $20\,732\,km^2$ (8004.67 square miles) in size, and population densities varied between 0.05 and $0.89\,km^2$/person.

Most major rural towns have a child and adolescent mental health service (CAMHS), where clinicians—generally psychologists, social workers or mental health nurses—provide mental health services to children, adolescents and their families. The clinician's experience treating EDs depended on their professional development pathway; however, a gap in expertise and experience treating EDs was generally noted for rural clinicians [38]. Although CAMHS are designed to deliver care close to home, the distance between the CAMHS and family home can still be very large for rural districts.

1.3 | Participants

Study coordinators (SC), together with rural health service stakeholders, being health district eating disorder coordinators (EDC) and study clinicians, were invited to participate in the study via email. As background, one SC oversaw the entire implementation project, and the other SC consulted as the clinical supervisor and trainer. Each health district is funded to employ a full-time EDC whose role is to develop and coordinate services for people with lived experiences of eating disorders across their health district. For the telehealth FBT implementation, the EDC was additionally responsible for the local facilitation and governance of the study (including assisting with ethics processes, recruitment strategies, attending investigator meetings and supporting study clinicians with cases) under the direction of the Chief Investigators (redacted for peer review) housed at a tertiary research institute. Clinicians were registered mental health professionals employed by the CAMHS identified by EDCs to participate in the telehealth-FBT study due to an interest in or previous experience treating adolescent EDs.

The sample size was limited by the total number of EDCs ($N=5$), clinicians ($N=9$) and study coordinators ($N=2$) involved in the broader study (maximum available participants $N=16$). Four EDCs, three study clinicians and two study coordinators ($N=9$, 56.25%) responded to the invitation to the implementation evaluation and participated in a semi-structured interview. Why potential participants declined was unknown due to the opt-in recruitment strategy used.

1.4 | Data Collection

Stakeholder perspectives were collected via separate, although similar, semi-structured interviews (see Appendix S2). The interview was structured according to the Consolidated Framework for Implementation Research (CFIR) [39] domains and explored the inner setting, outer setting, intervention characteristics, process and individual characteristics. These guides contained open-ended questions to encourage an unbiased and open discussion about the barriers and facilitators during the early implementation phase. However, to capture factors outside of the CFIR, the interviews also explored the participants' general perspectives regarding the challenges and facilitators faced before and during the implementation study in their service and health region.

Following consent, stakeholders completed a semi-structured interview, which took place during the first 6 months of implementing and delivering FBT via telehealth within their health services. A postgraduate Clinical Psychology student (author VK) conducted and audio recorded all 1-h interviews using videoconferencing.

1.5 | Research Team and Reflexivity

The first author, who was also the second coder, is a white, cisgender female Clinical Psychologist (PhD level). The first author had previously conducted qualitative research within a tertiary setting and had worked in the mental health industry for 10 years, seven of those in the field of eating disorders. Importantly, the first author is the coordinator of the overarching FBT telehealth study [35], which formed a significant component of her doctoral programme. For transparency, the first author became a study clinician to increase the study capacity to deliver telehealth-FBT, as several participating services faced significant strain caused by the COVID-19 pandemic and natural disasters [31, 40, 41]. The first author saw 25% of the final recruited sample; however, this occurred following the early implementation period of interest in this study. The first author did not view or code the transcript from her own interview. The second author conducted the interviews and was the primary coder. She was a cisgender female Master of Clinical Psychology student with limited eating disorder experience, except for a brief clinical placement within a specialist eating disorder treatment service (which delivered FBT). The second author had no prior relationship with the interviewees and was blinded to the implementation process and progress of the respective health districts.

The first and second authors held several a priori beliefs about implementing telehealth-delivered FBT before conducting this qualitative study, which should be disclosed. These beliefs included: (a) telehealth will likely serve as an effective mechanism to deliver FBT to those unable to access treatment face to face; (b) implementing telehealth into the health system will be challenging, given limited resources; and (c) research-related tasks and demands will likely create additional burden and strain in an already under-resourced system.

Considering that the first author had worked closely with the participants for some time to set up the implementation, she had a pre-existing level of rapport with the participants. Further, participants understood the goals and intention of the interviews, given their previous involvement in the study design. However, the existing rapport between the first author and participants may have impacted her interpretation of the interview material. Although the interviews were de-identified for analysis, the first author had a sense of what LHDs some participants were from, given her familiarity with the study's progress and the context of each district.

1.6 | Analysis

The interviews were audio-recorded, de-identified and transcribed verbatim by the second author. Interviews were managed and analysed using NVivo [12] (Lumivero), qualitative data analysis computer software. For accuracy, the first and second authors re-checked the transcripts against the audio recordings. The second author coded all interviews, and the first author cross-coded a random selection of 25% of the interviews.

A dual approach using both deductive and inductive thematic analysis was employed to draw upon the benefits of both methodologies [42, 43]. To begin with, the interviews were structured by the CFIR framework [25] and the CFIR factors were used to define pre-ordinate themes, and the results of this analysis will be explored in a subsequent publication. The results that emerged from the inductive analysis [44], which was used to identify any themes that could not be mapped onto the CFIR framework, are the focus of the current study. The inductive analysis followed the six-phase approach [45]: transcript creation and data familiarisation; identification of keywords; code selection; theme development; conceptualisation through the meaning making of keywords, codes and themes; and, finally, the development of a conceptual model. Before being named and defined, themes were reviewed by the research team via regular project meetings to achieve a richer interpretation of meaning rather than consensus.

2 | Results

2.1 | Participants

Nine stakeholders completed the interviews (see Table 1 for demographics). Seven stakeholders (77.78%) identified as female. All were tertiary educated, with the highest level of education ranging from a Bachelor's degree to a PhD. The EDCs and clinicians resided in and worked from large (MMM3) and medium (MMM4) rural towns; however, care was provided to families of varying rurality across their district (MM3–MM5).

2.2 | Themes

The qualitative analysis revealed a series of research-related factors that influenced the implementation of telehealth-delivered FBT within rural health services. The themes emerging from this analysis are presented below, categorised as research-related enablers and challenges.

2.3 | Enablers

2.3.1 | Translational Research Afforded a Reciprocal Benefit for Health Services and Research Centres

Participants discussed the 'reciprocal benefit for district and research' by participating in the research project. Specifically, all the EDCs noted the appeal of the intensive support and resources provided by the study. They described how this allowed their health services to embed FBT and to implement an alternative mode of delivering treatment (in this case, telehealth) that would meet the unique needs of their rural populations. There was an appetite from clinicians to join the research 'certainly not FBT trained...we were not doing a very good job at all...when we came on board up there was so much to do. But in terms of telehealth...like that was something we took really seriously I think, and I feel like as coordinators, because we know we've

TABLE 1 | Participant demographic information.

Stakeholder	Gender	Professional background	Highest level of education	Level of rurality (MM classification)
EDC	Female	Clinical psychologist	Masters	3
EDC	Female	Dietitian	Bachelor	3
EDC	Female	Psychologist	Masters	3
EDC	Female	Clinical social worker	PhD	4
Clinician	Male	Clinical psychologist	Masters	3
Clinician	Female	Clinical psychologist	Masters	4
Clinician	Female	Social worker	Bachelor	3
SC	Male	Clinical psychologist	PhD	n/a (international)
SC	Female	Clinical psychologist	Masters	1

Note: MM = Monash modified classification: An Australian classification system to define whether a location is metropolitan, rural, remote or very remote. The model measures remoteness and population size on a scale of MM 1 (major city) to MM 7 (very remote); MM3 is a large rural town (population between 15 000 and 50 000) and MM4 is a medium rural town (population between 5000 and 15 000).

got good relationships with these teams. We know the teams well. We didn't have to beg for people to come on board as the clinicians'.

Another EDC discussed how the research project triggered an 'increased interest in FBT across the district' and that 'participation in the trial benefited the service as a whole due to technology improvements' that were prompted by the study establishment. The flow-on effect of the study appeared to positively impact inter-team collaboration with study 'involvement facilitating more effort for communication with specific teams'.

2.3.2 | Clinicians Received Increased Support and Supervision

All participant groups discussed the benefit of improved access to support, which included regular clinician training and supervision to ensure treatment fidelity, clinician confidence and ultimately, patient/participant safety. Clinicians described how study supervision ensured there was 'clear understanding of where to go if experiencing difficulty' and facilitated the opportunity to learn from multidisciplinary perspectives 'to present cases and problem solve difficulties'. One EDC noted they 'started dialling into a FBT supervision each fortnight…I felt like it was every week for a while there to be able to support my local clinicians and to pick up on themes that needed addressing'.

2.3.3 | Families Had Improved Access to Evidence-Based Care

All participants emphasised how the translational research project increased and improved access to care for rural populations. According to one EDC, the study 'facilitated more awareness of eating disorders in the team' and 'increased people's desire to learn more about eating disorders'. Another EDC highlighted the geographic challenges faced by patients pre-study, noting that for many families accessing treatment came at a significant time cost: 'the sheer scale of the geographic area, with travel distances four hours, or for some people, nine hours down and back'.

Several participants described how the lack of access to other evidence-based care pathways ('we don't have many private options…we don't have access to the [hospital] outpatient program') invariably put pressure on health services to deliver FBT but that 'we did file audits in that time [pre-study] and we could see that people were not getting evidence-based treatment'.

2.3.4 | Translational Research Facilitated the Provision of Resources

Participants widely recognised the 'opportunity to contribute to this research' (enabled the allocation of additional resources necessary to deliver FBT effectively and safely). These resources included training, supervision, technology and tools such as scales and technology aids, which might otherwise have been inaccessible to under-resourced health services. Additionally, participants noted the research provided an avenue for professional development and 'an opportunity to enhance skills'. Some health services highlighted challenges faced by families, such as limited access to reliable scales for monitoring their child's weight or insufficient technology like webcams, microphones and internet dongles necessary for telehealth sessions. A SC explained how the implementation project, through its funding, 'provided these resources to families' to facilitate their participation.

2.3.5 | Translational Research Assisted Health Services to Meet Policy and Clinical Governance Demands

Participating in the implementation project meant that stakeholders could report to governance and service directives to bridge access gaps, particularly when there was no 'local infant, child, youth or barely any family clinician that would be an FBT trade' available. Participation meant services could 'meet government directives' of 'treating people in a timely manner as close to home as possible'. One clinician described how the early study results allowed them to 'advocate for an eating disorder service' within their LHD. This was echoed by an EDC who said there was an interest at a higher management level for 'ongoing telehealth FBT' post-research implementation.

2.4 | Challenges

2.4.1 | The Mismatch Between Recruitment Processes and Existing Treatment Pathways

Despite efforts to establish a pathway for study recruitment, the participants discussed the challenge of embedding research recruitment in existing care pathways, necessitating adjustments to usual service intake, assessment and triage processes. Additional levels of research-related consent were required from patients and clinicians to provide and collect data and participate in other research-related activities such as study investigator meetings and evaluation interviews. One EDC noted the challenge of requiring consent and the delays to treatment this risked:

> We could get the parents to sign the consent but we couldn't get the young person to sign a consent. And they don't have to consent if they're coming in, for you know outpatient face-to-face… but yeah that's certainly been a limitation with the implementation.

In ordinary circumstances, when a family is referred to FBT, they have just learned of their child's AN diagnosis and are in a state of heightened anxiety. Perhaps their child has been admitted to hospital due to medical instability, but almost always, families are overwhelmed with the prospect of commencing treatment [10]. Recruiting families to the research project at this time was challenged by family distress and experiencing research processes and requirements as confusing

or overwhelming, which at times, lead to family hesitation and even refusal '[family] really didn't understand the study and that it wasn't actually going to be involved in their treatment and thought that was just going to be another layer into their treatment'.

2.4.2 | The Ethical Dilemma When Research Conflicts With Clinical Care

The stakeholders responsible for family recruitment described additional ethical dilemmas triggered by the research study. All families offered the telehealth study were also offered treatment as usual (i.e., face-to-face FBT) as per ethics requirements. However, treatment as usual availability depended on resources and workforce capacities. At times, study recruiters could not invite families to the study as they could not guarantee treatment as usual (face-to-face FBT) was also available should the family decline telehealth. EDCs reflected on the challenge of managing the competing demands, as they wanted to support the research project and offer the telehealth pathway to families in need but were restricted or unable to do so when local care was unavailable.

Stakeholders noted how some ethical dilemmas emerged because the research occurred in real-world settings. Stakeholders described the difficulty of 'juggling the urgency of clinical needs with research responsibilities and procedures' and the importance of 'not compromising on care to fit into the study'.

EDCs described the impact of a widespread workforce training initiative [46] that occurred at the same time as the implementation project on recruitment. EDCs reported feeling obligated to meet their commitment to the research project while also ensuring local staff are given access to cases (i.e., via face-to-face delivery) to '…become confident and capable in FBT, before (providing care within the) research trial and using telehealth'. EDCs and health services had a responsibility to 'prioritise the training needs of staff and to allocate FBT cases to face-to-face pathways for training new clinicians', meaning that fewer patients overall were available for the telehealth project.

2.4.3 | The Burden of Holding Multiple Roles Within Translational Designs

The EDCs and study therapists were also enrolled as participants subject to research protocol demands (such as completing interviews, implementation surveys, consort data tracking and post-session surveys) and uniquely positioned as clinician-researcher subjects. Stakeholders described the conflicts between research, managerial and therapeutic processes that emerged due to their multiple roles.

For EDCs (coordinator-researcher-participants), this multiple role involved holding responsibility for recruitment to the FBT telehealth study while simultaneously (and more importantly) ensuring young people were accessing treatment as quickly as possible. Study therapists (clinician-researcher-participants) described the 'anxiety of doing it [FBT] as per the manual and protocol' as a barrier to engaging in the project. Although FBT delivered outside of research conditions should always be practised as per the evidence base (i.e., FBT treatment protocol), therapists described a lack of confidence to respond to peripheral issues (such as addressing comorbidities) without breaching the research protocol (by delivering interventions other than FBT during the study period).

All participants highlighted that research tasks in addition to their usual clinical responsibilities felt burdensome at times. Study clinicians described the additional workload of the participant role 'needing to complete post-session surveys and fill out questionnaires and attend interviews regularly' as well as the mandatory attendance of study supervision. An SC, who also facilitated study supervision, discussed variable supervision attendance, 'sometimes there's one, sometimes there's five, the next time there is three. I don't know what the barrier is on their part…'. The SC went on to hypothesise that perhaps low attendance was partly due to competing demands, for example, 'not being assigned a case, or their schedule is such that they can't attend, and if they do attend they might be quiet…relying on just two or three regulars perhaps have limited the amount of discussion that we can have around these challenges'.

3 | Discussion

This paper presents the results of stakeholder interviews that explored the barriers and facilitators encountered during the initial implementation of telehealth-FBT for young people with AN in rural health settings. Through thematic analysis, stakeholders described how the translational research design was seen to improve access to FBT, afford rural health services access to clinical expertise and assist with meeting government directives. However, the stakeholders also highlighted the challenges of using research to implement FBT into clinical pathways and within non-academic health services, which created ethical dilemmas and required stakeholders to hold multiple, at times conflicting and burdensome roles.

Evaluations of implementing FBT outside of specialist services have been limited to date [26]. Despite the increased use of trial designs that aim to evaluate the effectiveness of intervention and implementation simultaneously [47], the evidence-practice gap has remained largely unchanged. In response, the present study explored the relationship between research and implementation in rural settings where access gaps are particularly striking. The stakeholder interviews demonstrated how research-related processes are a highly relevant dimension to influence the success of implementation studies within real-world health settings. For example, EDCs described how the workforce training initiative that occurred at the same time as the implementation study led to a conflict of demands when referring families to FBT; on one hand, EDCs were anxious to meet study agreements, while on the other, they wanted to ensure their staff were afforded the opportunity to take on cases as part of their workforce training for as-usual service delivery.

Involving stakeholders throughout the research implementation process ensures strategies are relevant and findings are appropriately and iteratively actioned, thus improving the likelihood of translation and sustainability [48]. This study explored the

perspectives of the stakeholders implementing the intervention and several themes aligned with the conclusions of Fudge and colleagues' review [27], regarding the impact of research processes on clinical care. In our study, all stakeholders reflected on the impact of research governance on real-world care pathways, both as an enabler of research translation and implementation, but also as a challenge for stakeholders to manage, with potential impacts on recruitment and scientific rigour.

While we have positioned and described the themes in the current study as primarily enablers or challenges that emerged from translational research processes, it is very possible that the same themes could be viewed contrariwise. For example, the stakeholders described holding multiple roles (i.e., a clinician-researcher-subject) as creating additional clinical and administrative demands. However, other studies have described the benefits and importance of including clinician-researchers (also known as 'double agents') in translational and implementation research [1, 49]. Including clinician-researchers may improve service quality due to their active involvement with clinical practice, increased access to clinical contacts and familiarity with care pathways [50] while also being known to clinical staff and administrators [51]. This was likely the case for the EDCs and, to a lesser extent, the SCs, who were well known and trusted by the study therapists.

This study extends the results of other FBT implementation studies [18] by including additional stakeholders involved in the implementation at higher levels. Similar to Couturier et al. [26], participants in this study noted how health system and research challenges can impede and complicate prompt treatment delivery. Given the risks associated with untreated AN, FBT needs to be delivered urgently, and EDCs and clinicians described an anxiety relating to research processes impeding the speed at which this could occur. The participants explored the impact of research processes and challenges associated with fitting research into a system versus a system moulding to fit the research, a familiar challenge to research translation, but not previously identified in the eating disorder field.

3.1 | Limitations

While the findings of this study are supported by themes identified in other fields of clinical research [27] and large-scale systematic reviews [51], perhaps obtaining the insights and experiences of stakeholders who did not participate in the implementation study for various reasons (such as lack of local pathways or workforce turnover) would have revealed a different outcome. Relatedly, patients, their families and other individuals with a lived experience of eating disorders engaging with the rural health system were not included in the early-implementation interviews. Interviews were conducted with patients and their families during the latter phases of implementation, and these will be analysed and presented separately; however, their absence from the early-implementation phase limits the richness of the data available and risks missing valuable information that would have informed the implementation.

Our results may have been influenced by the timing of interviews being held during the early implementation phase,

resulting in a focus on recruitment and study commencement. Later interviews might have yielded different themes and will be explored in subsequent research. Of note, the analysis was completed by clinician–researchers who understood and experienced working with eating disorders and FBT, which could have led to a bias impacting the analysis. An analysis conducted by researchers with different professional backgrounds may have led to alternative interpretations of the data.

3.2 | Implications for Future Research

The multi-site analysis facilitated heterogeneity and variance in experience, increasing the real-world relevance of these results. This study reinforced the importance and impact of research translation factors and processes on the implementation of telehealth-delivered specialist treatments in generalist health services. However, the results also detail the challenges of negotiating research demands alongside clinical care pathways. While CFIR is an invaluable tool for understanding implementation and will be explored fully in a separate paper, its current structure did not fully accommodate the complexities of integrating research within service delivery. Our findings suggest that future iterations of implementation frameworks may need to account for research as a distinct construct influencing implementation outcomes.

Future research would benefit from collecting longitudinal data to explore the implementation of evidence-based eating disorder treatments and telehealth into health services across multiple implementation phases. Additionally, as was the case in this study, implementing evidence-based interventions into multiple health services and ecosystems would benefit from further analysis of the differing contextual factors across implementation sites and settings and the potential impact of this on patient outcomes, intervention sustainability and workforce expertise and skills. Perhaps such an investigation would offer insights into what conditions yield successful research translation and why. More specifically, future research could examine how both telehealth and FBT delivered via research protocols into health services (as opposed to research settings) can be embedded and sustained in clinical care.

4 | Conclusion

This study highlights the dual nature of using research to deliver and evaluate implementation efforts. Translational research aims to reduce the research-practice lag, which is particularly felt in rural settings. The results of this study were drawn from the understudied rural context. While translational research facilitated access to evidence-based care and clinical expertise, it also introduced challenges that impacted service delivery and clinician workload—factors relevant for implementation researchers and intervention deliverers in other contexts.

Author Contributions

Ashlea Hambleton: conceptualization, investigation, writing – original draft, methodology, writing – review and editing, formal analysis, project administration. **Verusha Kandar:** formal analysis, writing – review

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Ethics Statement

The study protocol has been approved by Sydney Local Health District Human Research Ethics Review Board (HREC #2020/ETH00186). All participants provided written informed consent in accordance with the approved study protocol prior to enrolment in the study.

Conflicts of Interest

S.T. receives royalties from Hogrefe and Huber, McGraw Hill and Taylor and Francis for published books/book chapters. He has received honoraria from the Takeda Group of Companies for consultative work, public speaking engagements and commissioned reports. He has chaired their Clinical Advisory Committee for Binge Eating Disorder. He is the editor-in-chief of the Journal of Eating Disorders. S.T. is a committee member of the National Eating Disorders Collaboration as well as the Technical Advisory Group for Eating Disorders. D.L.G. receives royalties from Guilford Press and Routledge and is co-director of the Training Institute for Child and Adolescent Eating Disorders LLC.

Data Availability Statement

Research data are not shared.

References

1. D. M. Wilson-Kovacs and C. Hauskeller, "The Clinician-Scientist: Professional Dynamics in Clinical Stem Cell Research," *Sociology of Health & Illness* 34, no. 4 (2012): 497–512.

2. Deloitte Access Economics, *Paying the Price, Second Edition: The Economic and Social Impact of Eating Disorders in Australia* (Butterfly Foundation, 2024).

3. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. (American Psychiatric Association, 2013).

4. G. Kjaersdam Telléus, J. R. Jepsen, M. Bentz, et al., "Cognitive Profile of Children and Adolescents With Anorexia Nervosa," *European Eating Disorders Review* 23, no. 1 (2015): 34–42.

5. B. Herpertz-Dahlmann and B. Dahmen, "Children in Need-Diagnostics, Epidemiology, Treatment and Outcome of Early Onset Anorexia Nervosa," *Nutrients* 11, no. 8 (2019): 1932.

6. A. E. van Eeden, D. van Hoeken, and H. W. Hoek, "Incidence, Prevalence and Mortality of Anorexia Nervosa and Bulimia Nervosa," *Current Opinion in Psychiatry* 34, no. 6 (2021): 515–524.

7. A. Hambleton, G. Pepin, A. Le, et al., "Psychiatric and Medical Comorbidities of Eating Disorders: Findings From a Rapid Review of the Literature," *Journal of Eating Disorders* 10, no. 1 (2022): 132.

8. M. Fichter, N. Quadflieg, R. D. Crosby, and S. Koch, "Long-Term Outcome of Anorexia Nervosa: Results From a Large Clinical Longitudinal Study," *International Journal of Eating Disorders* 50, no. 9 (2017): 1018–1030.

9. J. H. Reijonen, H. D. Pratt, D. R. Patel, and D. E. Greydanus, "Eating Disorders in the Adolescent Population: An Overview," *Journal of Adolescent Research* 18, no. 3 (2003): 209–222.

10. J. Lock and D. Le Grange, *Treatment Mannual for Anorexia Nervosa*, 2nd ed. (Guilford Press, 2015).

11. J. Couturier, M. Kimber, and P. Szatmari, "Efficacy of Family-Based Treatment for Adolescents With Eating Disorders: A Systematic Review and Meta-Analysis," *International Journal of Eating Disorders* 46, no. 1 (2013): 3–11.

12. S. Madden, J. Miskovic-Wheatley, A. Wallis, M. Kohn, P. Hay, and S. Touyz, "Early Weight Gain in Family Based Treatment Predicts Weight Gain and Remission at 12-Month Follow-Up for Adolescent Anorexia Nervosa," *International Journal of Eating Disorders* 48 (2015): 415–427.

13. E. J. Jensen, E. Wieling, and T. Mendenhall, "A Phenomenological Study of Clinicians' Perspectives on Barriers to Rural Mental Health Care," *Journal of Rural Mental Health* 44, no. 1 (2020): 51–61.

14. C. Cosgrave, R. Hussain, and M. Maple, "Factors Impacting on Retention Amongst Community Mental Health Clinicians Working in Rural Australia: A Literature Review," *Advances in Mental Health* 13, no. 1 (2015): 58–71.

15. P. Paliadelis, G. Parmenter, V. Parker, M. Giles, and I. Higgins, "The Challenges Confronting Clinicians in Rural Acute Care Settings: A Participatory Research Project," *Rural and Remote Health* 12 (2012): 2017.

16. K. E. Anderson, C. E. Byrne, R. D. Crosby, and D. Le Grange, "Utilizing Telehealth to Deliver Family-Based Treatment for Adolescent Anorexia Nervosa," *International Journal of Eating Disorders* 50, no. 10 (2017): 1235–1238.

17. D. Steinberg, T. Perry, D. Freestone, C. Bohon, J. H. Baker, and E. Parks, "Effectiveness of Delivering Evidence-Based Eating Disorder Treatment via Telemedicine for Children, Adolescents, and Youth," *Eating Disorders* 31, no. 1 (2023): 85–101.

18. J. Couturier, D. Pellegrini, L. Grennan, et al., "A Qualitative Evaluation of Team and Family Perceptions of Family-Based Treatment Delivered by Videoconferencing (FBT-V) for Adolescent Anorexia Nervosa During the COVID-19 Pandemic," *Journal of Eating Disorders* 10, no. 1 (2022): 111.

19. S. Touyz, H. Lacey, and P. Hay, *Eating Disorders in the Time of COVID-19* (Springer, 2020), 1–3.

20. P. L. Brothwood, J. Baudinet, C. S. Stewart, and M. Simic, "Moving Online: Young People and Parents' Experiences of Adolescent Eating Disorder Day Programme Treatment During the COVID-19 Pandemic," *Journal of Eating Disorders* 9, no. 1 (2021): 62.

21. J. Baudinet, A. Konstantellou, A. Hambleton, K. Bialluch, G. Hurford, and C. S. Stewart, "Do People Want the 'New Normal'? A Mixed Method Investigation of Young Person, Parent, and Clinician Experience and Preferences for Eating Disorder Treatment Delivery in the Post-COVID-19 World," *Nutrients* 15, no. 17 (2023): 3732, https://doi.org/10.3390/nu15173732.

22. S. Smith and G. Johnson, "A Systematic Review of the Barriers, Enablers and Strategies to Embedding Translational Research Within the Public Hospital System Focusing on Nursing and Allied Health Professions," *PLoS One* 18 (2023): e0281819.

23. M. Jolles, R. Lengnick-Hall, and B. Mittman, "Core Functions and Forms of Complex Health Interventions: A Patient-Centered Medical Home Illustration," *Journal of General Internal Medicine* 34, no. 6 (2019): 1032–1038, https://doi.org/10.1007/s11606-018-4818-7.

24. S. Bull and N. Ezeanochie, "From Foucault to Freire Through Facebook: Toward an Integrated Theory of mHealth," *Health Education & Behavior* 43, no. 4 (2016): 399–411.

25. L. J. Damschroder, C. M. Reardon, M. A. O. Widerquist, and J. Lowery, "The Updated Consolidated Framework for Implementation Research Based on User Feedback," *Implementation Science* 17, no. 1 (2022): 75.

26. J. Couturier, M. Kimber, M. Barwick, et al., "Themes Arising During Implementation Consultation With Teams Applying Family-Based Treatment: A Qualitative Study," *Journal of Eating Disorders* 6 (2018): 32.

27. N. Fudge, E. Sadler, H. R. Fisher, J. Maher, C. D. Wolfe, and C. McKevitt, "Optimising Translational Research Opportunities: A Systematic Review and Narrative Synthesis of Basic and Clinician Scientists' Perspectives of Factors Which Enable or Hinder Translational Research," *PLoS One* 11, no. 8 (2016): e0160475.

28. L. Wolfenden, S. L. Yoong, C. M. Williams, et al., "Embedding Researchers in Health Service Organizations Improves Research Translation and Health Service Performance: The Australian Hunter New England Population Health Example," *Journal of Clinical Epidemiology* 85 (2017): 3–11.

29. M. S. Bauer, "A Review of Quantitative Studies of Adherence to Mental Health Clinical Practice Guidelines," *Harvard Review of Psychiatry* 10, no. 3 (2002): 138–153.

30. S. C. Slade, K. Philip, and M. E. Morris, "Frameworks for Embedding a Research Culture in Allied Health Practice: A Rapid Review," *Health Research Policy and Systems* 16, no. 1 (2018): 29.

31. A. Hambleton, D. Le Grange, M. Kim, J. Miskovic-Wheatley, S. Touyz, and S. Maguire, "Delivering Evidence-Based Treatment via Telehealth for Anorexia Nervosa in Rural Health Settings: A Multi-Site Feasibility Implementation Study," *Journal of Eating Disorders* 12, no. 1 (2024): 207.

32. Australian Institute of Health and Welfare, *Rural, Regional and Remote Health: Indicators of Health Status and Determinants of Health* (Australian Institute of Health and Welfare, 2011).

33. D. DeHart, L. B. King, A. L. Iachini, T. Browne, and M. Reitmeier, "Benefits and Challenges of Implementing Telehealth in Rural Settings: A Mixed-Methods Study of Behavioral Medicine Providers," *Health & Social Work* 47, no. 1 (2021): 7–18, https://doi.org/10.1093/hsw/hlab036.

34. J. McCormack, H. Watson, C. Harris, J. Potts, and D. Forbes, "A Hub and Spokes Approach to Building Community Capacity for Eating Disorders in Rural Western Australia," *Australian Journal of Rural Health* 21 (2013): 8–12.

35. A. Hambleton, D. Le Grange, J. Miskovic-Wheatley, S. Touyz, M. Cunich, and S. Maguire, "Translating Evidence-Based Treatment for Digital Health Delivery: A Protocol for Family-Based Treatment for Anorexia Nervosa Using Telemedicine," *Journal of Eating Disorders* 8, no. 1 (2020): 50.

36. A. Tong, P. Sainsbury, and J. Craig, "Consolidated Criteria for Reporting Qualitative Research (COREQ): A 32-Item Checklist for Interviews and Focus Groups," *International Journal for Quality in Health Care* 19 (2007): 349–357.

37. A. Hartati, M. Jarrett, B. McDougall, M. Kent, M. Ljubojevic, and K. Stolzenhein, "Care Navigation and Coordination Program on Reducing Hospital Use for Adults With Complex Health and Psychosocial Needs in South West Sydney, Australia," *International Journal of Integrated Care* 24, no. 3 (2024): 7, https://doi.org/10.5334/ijic.7739.

38. S. Maguire, A. Li, M. Cunich, and D. Maloney, "Evaluating the Effectiveness of an Evidence-Based Online Training Program for Health Professionals in Eating Disorders," *Journal of Eating Disorders* 7, no. 1 (2019): 14.

39. L. J. Damschroder, D. C. Aron, R. E. Keith, S. R. Kirsh, J. A. Alexander, and J. C. Lowery, "Fostering Implementation of Health Services Research Findings Into Practice: A Consolidated Framework for Advancing Implementation Science," *Implementation Science* 4, no. 1 (2009): 1–15.

40. S. Vardoulakis, V. Matthews, R. S. Bailie, et al., "Building Resilience to Australian Flood Disasters in the Face of Climate Change," *Medical Journal of Australia* 217, no. 7 (2022): 342–345.

41. A. Filkov, T. Ngo, S. Matthews, S. Telfer, and T. Penman, "Impact of Australia's Catastrophic 2019/20 Bushfire Season on Communities and Environment. Retrospective Analysis and Current Trends," *Journal of Safety Science and Resilience* 1, no. 1 (2020): 44–56.

42. K. Proudfoot, "Inductive/Deductive Hybrid Thematic Analysis in Mixed Methods Research," *Journal of Mixed Methods Research* 17, no. 3 (2023): 308–326.

43. V. Braun and V. Clarke, "Using Thematic Analysis in Psychology," *Qualitative Research in Psychology* 3, no. 2 (2006): 77–101.

44. C. Erlingsson and P. Brysiewicz, "A Hands-On Guide to Doing Content Analysis," *African Journal of Emergency Medicine* 7, no. 3 (2017): 93–99.

45. M. Naeem, W. Ozuem, K. Howell, and S. Ranfagni, "A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research," *International Journal of Qualitative Methods* 22 (2023): 16094069231205789.

46. Ministry of Health, *NSW Service Plan for People With Eating Disorders 2021–2025*, ed. Ministry of Health (Publisher is the Ministry of Health, NSW Government, 2021).

47. G. M. Curran, M. Bauer, B. Mittman, J. M. Pyne, and C. Stetler, "Effectiveness-Implementation Hybrid Designs: Combining Elements of Clinical Effectiveness and Implementation Research to Enhance Public Health Impact," *Medical Care* 50, no. 3 (2012): 217–226.

48. G. Harvey, J. Rycroft-Malone, K. Seers, et al., "Connecting the Science and Practice of Implementation – Applying the Lens of Context to Inform Study Design in Implementation Research," *Frontiers in Health Services* 3 (2023): 1162762.

49. P. T. Yanos and D. M. Ziedonis, "The Patient-Oriented Clinician-Researcher: Advantages and Challenges of Being a Double Agent," *Psychiatric Services* 57, no. 2 (2006): 249–253.

50. A. Geddis-Regan, C. Exley, and G. Taylor, "Navigating the Dual Role of Clinician-Researcher in Qualitative Dental Research," *JDR Clinical & Translational Research* 7, no. 2 (2022): 215–217.

51. E. Hay-Smith, M. Brown, L. Anderson, and G. Treharne, "Once a Clinician, Always a Clinician: A Systematic Review to Develop a Typology of Clinician-Researcher Dual-Role Experiences in Health Research With Patient-Participants," *BMC Medical Research Methodology* 16 (2016): 95, https://doi.org/10.1186/s12874-016-0203-6.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.