

Workforce strategies to address children's mental health and behavioural needs in rural, regional and remote areas: A scoping review

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Abstract

Introduction: Children living in rural, regional and remote locations experience challenges to receiving services for mental illness and challenging behaviours. Additionally, there is a lack of clarity about the workforce characteristics to address the needs of this population.

Objective: To scope the literature on the rural, regional and remote child mental health and behavioural workforce and identify barriers and enabling mechanisms to mental health service provision.

Design: A scoping review utilising the Joanna Briggs Institute methodology. A database search was undertaken using Medline, CINAHL, PsycINFO, ProQuest and Scopus to identify papers published 2010–2023. Research articles reporting data on mental health workforce characteristics for children aged under 12 years, in rural, regional or remote locations were reviewed for inclusion.

Findings: Seven hundred and fifty-four papers were imported into Covidence with 22 studies being retained. Retained studies confirmed that providing services to meet the needs of children's mental health is an international challenge.

Discussion: The thematic analysis of the review findings highlighted four workforce strategies to potentially mitigate some of these challenges. These were: (1) The use of telehealth for clinical services and workforce upskilling; (2) Role shifting where non mental health professionals assumed mental health workforce roles; (3) Service structure strategies, and (4) Indigenous and rural cultural factors.

Conclusion: A range of potential strategies exists to better meet the needs of children with mental health and behavioural issues. Adapting these to specific community contexts through co-design and production may enhance their efficacy.

KEYWORDS

rural mental health issues, rural workforce issues, workforce, youth health

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1 | BACKGROUND

Internationally, mental health services for children aged 0–12 living outside of metropolitan settings are scarce,¹ with complex barriers further challenging timely provision of appropriate services.² These barriers include low uptake of services when they are available, travel and financial costs, and parental knowledge gaps on mental health and service access.^{2,3} The disparity in children's mental health services is neither new nor geographically contained, with those living in rural settings being globally recognised as experiencing comparative disadvantage across health, developmental and social indicators.⁴ Contextually, rural children will experience higher levels of Adverse Childhood Events (ACEs) compared to urban populations, significantly heightening their lifetime risk of both chronic physical health conditions and psychological impairment.⁵ Importantly, this age group also has significant potential for positive impact from primary mental health interventions compared to older populations.⁶

Although Australia is one of the most urbanised countries in the world, children in rural settings with mental health or behavioural challenges are particularly underserved. Nationally, 13.6% of children experience mental health issues, with ADHD and anxiety being most prevalent.⁷ In Australia, for children aged 5–14 years, the burden of mental illness ranks in the top five leading causes of disease contributing to 30% and 24% of the total disease burden for males and females, respectively.^{8,9} This largely unmet mental health need exists in the context of the wider mental health system identified as being not fit for purpose, poorly aligned to other service providers such as schools and disability providers, and understaffed to meet the populations needs.^{10,11} Consequently, half of Australian children with mental illness lack access to timely treatment for their condition and two thirds of parents are unable to utilise support services for their children.¹²

For Aboriginal and Torres Strait Islander children and youth living in rural Australia there are additional contexts to mental health need. Positive mental health for this population includes a sense of belonging, having a strong cultural identity, having culture at the centre of care, and having positive reciprocal relationships.³ The legacies of colonisation in Australia and ongoing intergenerational trauma also affect Indigenous children, young people and families. Social and emotional wellbeing is a holistic way of addressing positive mental health with a context of land, culture, spirituality and ancestry.¹³ Limited consideration of Indigenous Australian's conceptualisation of mental health is a recognised barrier to mental health systems access. Expanding and strengthening a culturally responsive workforce in mental health is one recognised way to improve the cultural safety experienced by these service users.

What is already known on this subject

- Children's mental health services in rural, remote and regional settings are not meeting the populations' needs.
- Access to children's mental health services in rural settings have additional barriers to those in metropolitan centres.
- Indigenous children's mental health needs are compounded by the legacies of colonisation and ongoing intergenerational trauma.

What this paper adds

- The scoping review findings offer a synthesis of research on children's workforce strategies that seek to address the challenges of receiving adequate services.
- The analysis of the findings highlights barriers and enabling mechanisms impacting the efficacy of the identified workforce strategies.

The wider inadequate support for mental health services worsens in line with geographical remoteness, placing children living in Australian regional and remote dwellings at risk of poorer developmental, health and well-being outcomes compared to urban children.¹⁴ Additionally, this population has increased barriers to potentially supportive social determinants of health. Commonly these barriers include socioeconomic disadvantage, increased likelihood of social isolation, increased likelihood of exposure to family violence, and lower likelihood to engage in early childhood education.¹⁵ More recently, the effects of natural disasters have placed this already vulnerable population at even greater danger for a rise in mental illness.^{12,16,17} An increased exposure to adverse conditions in under-served geographically rural, regional and remote communities, highlights the need for effective mental health and support services, particularly a workforce with specialist skills, for children.¹⁴ The urgency of this need is highlighted through children under 12 years living in rural, regional and remote areas being identified as a priority population group for mental health service provision in recognition of their vulnerability.^{7,9,14}

Along with the disparities in mental health services across geographical locations, the characteristics of the workforce available to address child mental illness and behavioural conditions are unclear. This can be attributed to mental health services being nuanced and heterogenous across jurisdictions, with a lack of consistency to mental healthcare approaches.¹⁸ Additionally, children and youth

will frequently seek support for mental health issues outside of mainstream mental health services, including schools and out-patient settings,¹⁹ further challenging clarity toward workforce characteristics. Regardless of how workforce is structured, or indeed where they positioned, providing services to rural children is specialised mental health work. Workforce capabilities underpinning this works includes but is not limited to clinical knowledge on assessments and conditions, inter-personal capabilities to lower stigma and build trust and communication skills for children and youth, as well as having an overview of both available community resources and referral pathways.²⁰

In light of the challenges faced by geographically remote communities and a lack of clarity towards what constitutes an effective children's mental health rural workforce, a scoping review was chosen to construct an overview. The following research question was formulated: 'What are the workforce characteristics to address child mental illness and behavioural conditions in rural, regional and remote areas?'. For the purpose of this review, rural, regional and remote regions refer to any districts or zones outside of metropolitan areas, as defined by the Australian Government's Department of Health and Aged Care.²¹

2 | METHOD

This scoping review was conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews.²² Prior to undertaking the review, a preliminary search of MEDLINE, The Cochrane Database of Systematic Review and JBI Evidence Synthesis was conducted, and no current or underway systematic reviews on the topic were identified.

2.1 | Search strategy

Targeting papers reporting primary research a three-step search strategy was used, in line with the JBI method. A preliminary search of Medline, CINAHL and PsychInfo was undertaken using the keywords derived from the Population, Concept and Context (PCC) elements of the review question, thus: 'children', 'mental illness', 'workforce', 'rural', 'regional' and 'remote'. This initial search was followed by analysis of the text words contained in the title and abstract as well as any index terms and subject headings that could be used as alternate search terms. The list of terms was expanded further through a brainstorming exercise undertaken by the research team. A second search using all relevant identified keywords, subject headings and index terms was then undertaken across all included databases: CINAHL, PsycINFO, MEDLINE, ProQuest and

Scopus. These electronic databases were selected as they contain large collections of peer-reviewed articles relating to the themes relevant to this review. To minimise publication bias and provide a thorough account of evidence, a grey literature search was also undertaken using government and professional association websites to identify reports relevant to the topic. Search phrases and keywords that were used to identify relevant literature were selected based on the PCC framework in accord with the JBI methodology²² and were generated in consultation with an academic librarian. Third, reference lists of all identified articles were searched for additional studies.

To ensure currency, all searches were limited to literature published since 2010. Due to the diverse and evolving language used to describe the workforce for mental health consumers, the chosen date parameters provided the most up-to-date terminology. In addition, the date range aligns with the date of the last National Mental Health Workforce Plan, released in 2011, which identified the need to improve workforce capacity and service access in rural, regional and remote locations.²¹

2.2 | Eligibility criteria

2.2.1 | Participants

To be included in the review, papers needed to focus on children under 12 years of age with mental illness and/or behavioural conditions. Mental illness is understood as being a clinically diagnosable disorder impacting an individual's functioning. As this review sought to specifically explore mental illness in children, studies describing children with neurodivergent conditions solely, were excluded; however, studies reporting or describing neurodivergent conditions with associated mental health or behavioural symptoms were reviewed for inclusion. Neurodivergent conditions refer to those in which thinking and information processing leads to impaired social and occupational functioning, and this is linked to behaviours and overall wellness.²²

2.2.2 | Concept

All workforce characteristics for child mental health and behavioural workforce were identified and reviewed. The characteristics assessed were workforce gender and age group; worker occupation (both healthcare and non-healthcare); educational background and years' experience; workforce size (headcount/FTE); employment status (permanent, temporary, casual, fly-in-fly-out/drive-in-drive-out); workforce adequacy (vacancies,

difficult to fill vacancies, funding, operating hours/days); workforce barriers; workforce facilitators; workforce strategies (recruitment and retention, incentives, training and support); and service delivery method (face-to-face vs. telehealth).

2.2.3 | Context

Rural, regional and remote geographical locations served as the context for the review, both nationally and internationally with rural, regional and remote referring to any districts or zones outside of metropolitan areas.

Covidence software was used to undertake this review. Consequently, two listed authors voted on each paper when undertaking the title and abstract screening, full text review and extraction stages. A third listed author then resolved any conflicting votes.

The search and screening process in determining papers for inclusion is presented in Figure 1.

2.3 | Findings

Findings are outlined in Extraction Table 1 with Table 2 detailing the workforce strategies identified within the retained papers and Table 3 outline the mechanisms influencing those strategies.

2.4 | Analysis

While not all scoping reviews include an identification of themes, it is an accepted approach of data analysis and presentation.²² The scoping review findings underwent descriptive content analysis following the approach of

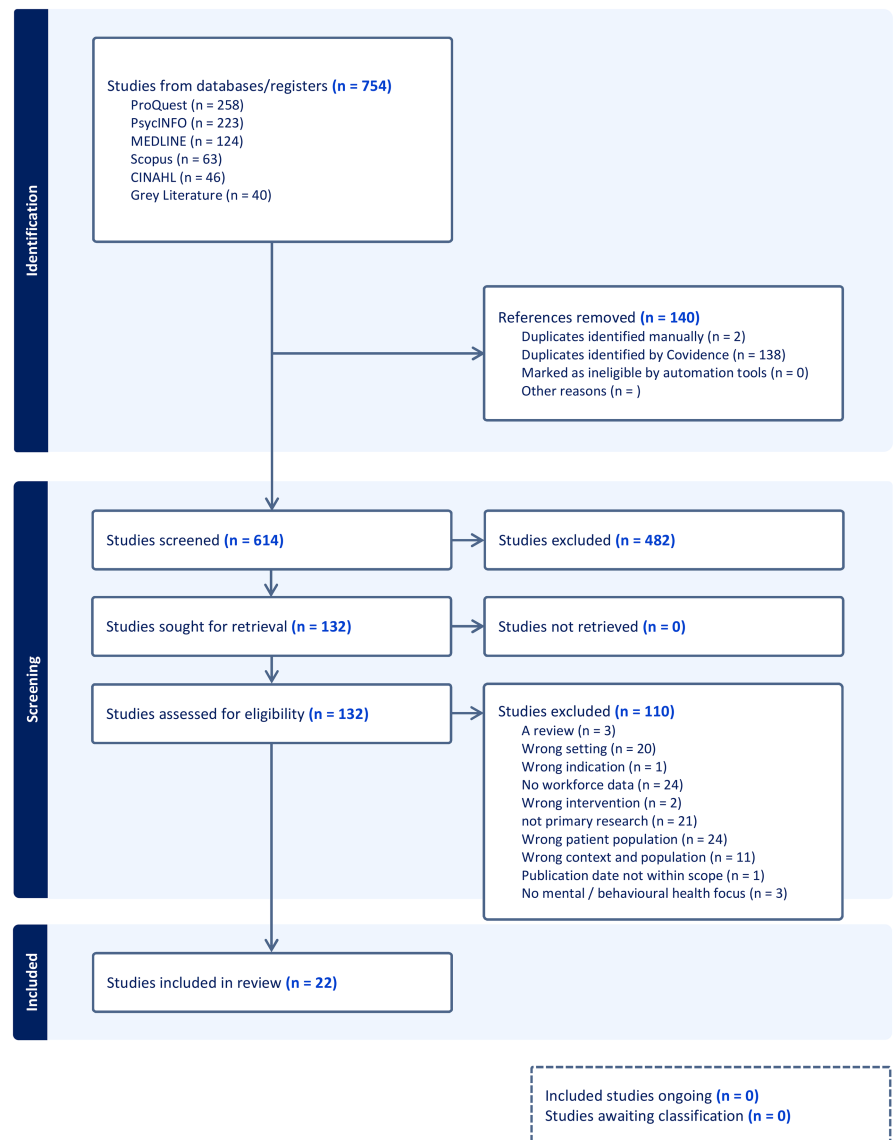


FIGURE 1 Characteristics of the child mental health and behavioural workforce in rural, regional and remote areas.

TABLE 1 Extraction table.

Author & year	Country	Study design	Numbers in study
Babatunde 2020	South Africa	Mixed methods	26
Babatunde 2020	South Africa	Case study	60
Chang 2022	Pacific Islands	Mixed methods	43
Chavira 2018	United States	Quantitative	31
Cruz 2021	India	Mixed methods	19
Dan 2020	United States	Program description	6917
Dejene 2017	Africa	Mixed methods	104
DiGirolamo 2021	United States	Quantitative	Schools = 718
Divan 2019	India	Quantitative	40 dyads
Friedman 2016	United States	Program description	N/A
Gillespie 2012	Canada	Mixed methods	44
Lalani 2019	Canada	Qualitative	37
Oostermeijer 2021	Australia	Mixed methods	31 PHNs
Paton 2019	Australia	Qualitative	31
Paton 2021	Australia	Qualitative	143
Saurman 2014	Australia	Quantitative	Activity data
Shamblin 2016	United States	Program description	N/A
Volpe 2013	Canada	Mixed methods	80 survey & 8 interview
Volpe 2014	Canada	Program description	N/A
Ward 2022	United States	Quantitative	62 schools
Wright 2023	Australia	Qualitative	21
Zayed 2016	Canada	Mixed methods	909

Braun and Clarke.²³ Initial thematic nodes were identified through reading and re-reading the data extracted from the review in response to the research question. Initial codes were assigned that reflected the data being reported. These initial codes were then searched for patterns that were then placed into categories. The final themes were checked and agreed upon by three of the listed authors.

Four themes of data were identified.

2.4.1 | Telehealth

The use of technology to overcome service shortages was widely reported in the retained papers. These technology-based approaches were predominantly deployed either for the provision of direct clinical services, or for educational programs seeking to increase the skills and/or knowledge of multi-disciplinary workforce in the field of Child Adolescent Mental Health (CAMH).

In their small American study of $N=31$ Chavira et al.²⁴ instructed parents on how to deliver cognitive behavioural therapy (CBT) for their child using videoconferencing. Although symptom mitigation was found, superior clinical outcomes were evident where this telehealth service was partially therapist supported. There was both rural

and Indigenous cultural reluctance to take up the service. Ward et al.²⁵ in their American study of service data from 62 schools also reported counselling-based services using videoconferencing. Counselling offered included individual, group and family approaches. This study indicated the use of information technology (IT)-based services increased access of treatments and assessments to rural children and youth. Volpe et al.²⁶ in a mixed method study of 80 survey and eight interviews, outlined specialist psychiatrist outreach services that are video conferenced based, and that the support of executive and administrative staff was pivotal in making this operational. Services offered were clinical reviews of complex cases and training to grow generalist workforce confidence and capability in CAMH work. Key enabling mechanisms included knowledge about the culture of the community and awareness of the specific resources available in each rural community. Psychiatric trainees being trained in the use of videoconferencing and having a shared sense of purpose in using the technologies to meet the needs of underserved regions were other important mechanisms for success. Zayed et al.²⁷ highlighted the importance of specialist psychiatric videoconferencing consultations for primary care physicians seeking expert views and treatment plans. However, this approach necessitates the physician's referral being

TABLE 2 Workforce strategies.

Study ID	Workforce strategies
Babatunde, 2020	CAMH services provided opportunities for self-development, for medically qualified professionals without formal qualifications in psychiatry or child and adolescent psychology
Bukola, 2020	Expand the team of CAMH specialists in the district to ensure a functional system of care for children and adolescents with mental health conditions
Chang, 2022	CAMH videoconference workshop and training enabling transfer of skills and knowledge in working with children and young people
Chavira, 2018	Parent delivered therapy in clinically under-resourced rural/remote settings
Dan, 2020	A community and school based behavioural health model: Core 4 Clinical Model to improve clinical service delivery
Dejene, 2017	Community health workers trained in CAMH approaches
DiGirolamo, 2021	Integrate community mental health providers within schools
Divan, 2019	N/A
Friedman, 2016	Enhancing greater cross agency cooperation
Gillespie, 2012	N/A
Lalani, 2019	Post natural disaster community-based co-production of resilience raising strategies
Oostermeijer, 2021	Sufficient and long-term funding to address workforce retention, build on existing expertise and skilled staff
Paton, 2019	An optimal model of care including empowering parents and greater cooperation and collaboration between service providers
Paton, 2021	Training in mental health by other professions to implement first-line mental health care management and access to specialist services
Saurman, 2014	Staff training in youth mental health and cultural sensitivity to enhance knowledge and skills to provide appropriate referrals and care
Shamblin, 2016	Comprehensive workforce development focused on implementing trauma-informed practices
Volpe, 2013	To provide mental health support to primary care settings through videoconferencing
Volpe, 2014	A dedicated TeleLink child psychiatrist met with frontline workers via teleconference to discuss clinical, program-wide, and community issues
Ward, 2022	Implementation of technology-based services facilitated by technology training and support, and having champions
Wright, 2023	The four-hour CAMH videoconference workshop with online CAMH learning modules and case presentations
Zayed, 2016	Models of collaboration where primary care practitioners become more active in providing mental health care

directly to the specialist and that referral being accepted. Saurman et al.²⁸ in their Australian based study of service data identified that telehealth could offer effective assessment focused emergency mental health services to rural and remote settings. During its initial launch of service there was a large uptake by hospital-based service providers with a corresponding and unexpected decrease in GPs and the public using the service. While reporting this finding for all age groups, children and Indigenous populations were specifically identified as a growing cohort accessing the service and that consequently staffs will need child, youth and culturally focused education.

In their qualitative study of 21 students and facilitators Wright et al.²⁹ focused on videoconferencing-based workforce CAMH development. They reported a multisite medical student workshop with expert input from medical specialists and Indigenous leaders. Overall positive

clinical outcomes were assisted by face-to-face facilitators encouraging case study formulations. In a Canadian study, Volpe et al.³⁰ reported qualitative findings on using multi-site videoconferencing technology to enhance CAMH capabilities in Nunavut staff through education and consultations. Evidence of capacity building, and greater workforce networking were identified. As in previous studies the need for rural and Indigenous cultural contexts was highlighted. Chang et al.³¹ reported findings from their study of a telehealth model seeking to build a community of practice and grow professional networks in the Pacific region. This mixed method study of 43 multi-disciplinary participants collected data before, during and 6 months following an educational training programme. The training was co-designed with the Royal Australian New Zealand College of Psychiatrists and supported by university infrastructure. Participants reported positive

TABLE 3 Influencing mechanisms on outputs of strategies.

Study ID	Challenges and barriers	Enablers and outcomes
Babatunde, 2020	No access to psychological expertise Delayed identification of CAMH need Lack of referral pathway information Poor intersectoral collaboration	Task shifting culminated in some initial assessment and interventions before referring for further care
Bukola, 2020	Absence intersectoral collaboration Absence of a CAMH psychiatric unit No referral systems for CAMHs Distance and travel costs No CAMH training for the nurses	Adequate supply of medications Crisis centres for holistic services
Chang, 2022	Poor quality of IT infra-structure Varied comfort levels for telehealth	University provided IT infra-structure
Chavira, 2018	Time constraints Technical difficulties Fact to face support lacking Lack of uptake due to cultural values	Audiobook preparation Availability of the therapist Lack of alternatives in rural settings
Dan, 2020	Inadequate skill attainment measures Inadequate monitoring of coaching	Improved outcomes for children, youth and families
Dejene, 2017	Lack of cultural competence Lack of CAMH competence and skills Lack of health institution resources Community stigma and discrimination	Training improves knowledge acquisition and positive attitude Using existing organisational structures
DiGirolamo, 2021	No demonstrable effect in reducing violence, drug and alcohol use, bullying and harassment	Embedding community providers in schools provided direct CAMH care Enhanced school climate and positive student behaviour
Divan, 2019	Complexity of the child's needs Lay worker's limited understanding of the condition	Favourable effects on autism dyadic communication, maternal mental health and rural feasibility
Friedman, 2016	Services lacking coordination Time required for assessments Different e-record systems Lack of inter-agency trust	Using university students to improve service utilisation rates University being engaged in community problem solving
Gillespie, 2012	Small remote communities have low lifestyle and professional satisfaction Lack of practice development Lack of academic preparation for rural work	Recruitment from within community Prior exposure to rural settings Emphasising positives: rural tranquillity and professional autonomy
Lalani, 2019	Families overburdened with additional psychological caring roles Lack of long-term support Lack of rural culture knowledge Transportation challenges	Inclusion of children's voices in recovery and policy development Emotional Intelligence education for children Education needs co-design with leaders
Oostermeijer, 2021	Not reported	Established organisations are best placed to launch new services Co-location as a one stop hub
Paton, 2019	Poor inter-sectorial coordination Exclude of co-morbidities	Physical proximity of professionals Nurse navigators Informed and capable parents
Paton, 2021	Strict criteria for accepting referrals Shortage of CAMHs professionals leads to clinician burnout Lack of interest by some GPs	Not reported
Saurman, 2014	A decline in the number of lay people and GPs using the service	A "free call" information service Promotion efforts in hospitals

TABLE 3 (Continued)

Study ID	Challenges and barriers	Enablers and outcomes
Shamblin, 2016	Not reported	Teacher confidence Teacher to consultant mutual professional respect
Volpe, 2013	Lack of cultural and community resource knowledge Inadequate time for reviews, teaching and co-working Poor video picture quality Lack of feedback re effectiveness of recommendations	Psychiatric trainees to develop telehealth expertise Support by programme executive and administrative staff A shared sense of purpose and belief in the mission of telepsychiatry
Volpe, 2014	Participation reduced staff offering away patient care Low cultural and social competence Confidentiality issues in rural settings Poor IT Resistance from professionals	Nunavut peoples educate non-Indigenous workforce IT technology effective for learning Support from administrators and frontline workers Being informed by local values
Ward, 2022	Limited access to broadband	School based tele-behavioural health services reduced care-seeking stigma Reimbursement for sustainability
Wright, 2023	Lack of clinical exposure to CAMH during students' placements Poor IT quality Lack of CAMH Psychiatry teaching staff	Quality of facilitation skills Facilitators being physically present Aboriginal cultural perspectives provided by an Aboriginal facilitator
Zayed, 2016	Long waiting lists Few available psychiatrists Referrals refused by psychiatrist No continuity of care Lack of clarity for referral processes Need inpatient beds CAMH field is exhausting practice	Desire for increased telehealth Desire for further CAMH education Co- designed collaborative care models supported by experts

impacts on CAMH knowledge and confidence, and the training being supportive of collegiate networking and solution generation. As with other videoconferencing studies, the quality of and access to IT infrastructure was a key factor in promoting or negating positive outcomes.

2.4.2 | Role shifting

Another common strategy to address the lack of child mental health and behavioural workforce was to train others to assume those roles. Chavira et al.²⁴ trained parents to deliver specific CBT interventions to their child, while upskilling healthcare assistants, and nurses. Paton et al.,³² in their qualitative study of 143 Australian child and adolescent psychiatrists, paediatricians, child psychologists and general practitioners reported a strong theme of enabling parents to be therapists, given the exposure and impact they have with their children. Such a shift would require the parents receiving the necessary tools and support. Divan et al.³³ reported lay workers being trained to deliver home based interventions with parents of autistic

children with co-occurring conditions. This comprehensive and well-designed study included 40 parent-child dyads in a randomised controlled trial against usual care. The training was developed by multi-disciplinary specialists. While some mental health conditions exceeded the lay-person's capabilities, findings suggested improved social communication in the children and better maternal mental health outcomes. Babatunde et al.³⁴ reported a case study design with qualitative data exploring multisectoral dynamics in providing CAMH care within resource poor contexts. This study drew on purposeful sampling of 60 CAMH stakeholders in South Africa. One key finding was the importance of equipping teachers and caregivers with prevention strategies, skills in screening for mental health issues, knowledge of referral pathways, and implementing and maintaining subsequent management plans. This study also described the importance of melding mental health screening and assessment with routine physical events such as immunisations. Zayed et al.²⁷ in their large Canadian mixed method study of 909 primary care physicians reported that they require more mental health knowledge and information, and support, due to

the taxing nature of child mental health work. In their Australian based qualitative study of children's mental health clinicians Paton et al.³² identified common barriers for all age groups including fragmented services, limited numbers of specialist psychiatrists and paediatricians, and a work force with insufficient training to work with children. Shifting first line care management to generalists who have received additional training was one offered solution by many participants. Generalists such as GPs having periodic education forums with specialists was offered as another strategy to bolster the quality of services.

Shamblin et al.³⁵ reported findings from their in depth North American based service evaluation study that trained and mentored teachers in trauma informed practices and parent child interaction therapy. Consultants were embedded in the classroom. Teachers reported enhanced skills and confidence in responding to challenging classroom behaviours, while children were found to have enhanced resilience to adversity. In their qualitative study Lalani et al.³⁶ sought to understand holistic factors to build resilience in CAHM populations. A key recommendation from their study was that school based mental health programmes offer best practice opportunities to deliver mental health and resilience building interventions. Their findings also suggested that education to upskill within a community needs to adopt a rural focus and be co-designed with leaders and key local representatives. Meaningfully involving children and youth throughout the entire process of instigating mental well-being programmes was also indicated as enabling better outcomes. Dejene et al.³⁷ examined training needs of generalist community health workers being upskilled in mental health in their mixed methods study of 104 community health extension workers in Ethiopia. Key factors to enhance CAMH capabilities included improving knowledge of referral services and developing pocket guides for practice. Improved confidence around mental health enabled better competence to address stigma and enhance coordination of activities to improve mental wellbeing. Cruz et al.³⁸ explored teachers adopting lay counselling roles in their mixed methods study undertaken in rural India. Nineteen teachers were given basic CBT training, in addition to learning to assess and observe children's needs. Qualitative findings showed some positive shift in attitudes in how teachers related to students but only limited clinical improvements. There were no shifts in quantitative findings on the levels of teacher's mental health knowledge.

2.4.3 | Service structures

School based services were found to be important strategic sites for child mental health promotion, identification,

and screening.³⁴ However, school nurses and other staff lack the child mental health expertise, necessitating upskilling through standardised training and treatment protocols. DiGirolamo et al.³⁹ also identified school systems as important to enhance detection, access, and coordination across service providers. Their quasi-experimental study of 718 schools in North America showed this was achieved by integrating providers into rural schools. Enhanced school climate measures and an increase in positive student behaviours were achieved. Another large school-based initiative was reported by Dan et al.⁴⁰ in an in-depth North American based study. The training called Core 4 Clinical Model was offered to over 350 school-based bachelor's and master's prepared professionals and over 1200 community-based professionals. A diverse range of multi-disciplinary stakeholders from all parts of community developed the model that aimed at enhancing clinical services. Based on alliance formation and shared decision making around interventions, both child and family improvements were reported. Ward et al.²⁵ situated their counselling telehealth service on the school site. This enabled behavioural health providers to deliver services without travel and removed the demand on parents to take time from work to collect their children from school to attend a face-to-face appointment. Improved access to behavioural health providers was reported as resulting in lower need for psychiatric reviews.

Babatunde et al.⁴¹ identified the necessity for enhanced integration of health, education and functional multi sector collaborations to promote mental health information. The same study found that a streamlined referral system allows a prioritised waiting list based on urgency to be populated. Zayed et al.²⁷ in their study of primary care physicians also recommended collaborative care models, potentially utilising those in communities who have knowledge of specific issues and local resources. The incorporation of mental health outreach teams into collaborative care models was found to be effective in the data reported by Babatunde et al.³⁴ Friedman et al.⁴² reported on a collaboration between university social work faculty and two government services engaged with foster children. Supervised social work students improved cooperation between these departments, despite incompatible record and technology systems. The university assuming a leadership role in the community and positive attitudes toward collaboration were key drivers for more efficient service delivery. Adopting this approach as particularly pertinent with Indigenous communities. Oostermeijer et al.⁴³ in their Australian based mixed method study of 31 Primary Health Networks identify the challenges and potential facilitating factors to CAMH services nationally, including rural and regional contexts. Mixed methods findings

suggested that established organisations are best placed to launch new services and that such services are CAMH friendly when co-located as a one-stop hub and supported by long term rather than short term funding. Patton et al.³² in another Australian based study highlighted co-location of mental health services, simplified referral pathways and enhanced communication as potential solutions to service barriers. Although the bulk of findings were metropolitan centric, rural settings were identified as having some advantages through having proximity of clinicians. Recruitment of staff to work within service structures is a commonly reported challenge in rural settings.

Paton and Hiscock⁴⁴ identified in their qualitative study of 31 Australian clinicians working with children with complex needs that enhanced coordination between disability services and funding such as the NDIS, and between NGO and State Government services would address experiences of service fragmentation. Clarification of referral pathways would also promote parents' abilities to navigate existing structures to better meet the needs of their children. The utilisation of nurse navigators would further enhance parents accessing services. Gillespie and Redivo⁴⁵ in a mixed methods study exploring rural CAMH workforce recruitment and retention identified multiple key factors. Their study of 44 Canadian clinicians showed that recruiting staffs from, or with previous exposure to, rural communities was one such strategy. Additionally, targeting workforce with affinity for varied practice and professional autonomy is also promising.

2.4.4 | Cultural considerations

All three previous themes of strategies, those incorporating telehealth, role shifting, and service structures were identified as situated within a framework of Indigenous and/or rural cultural considerations. Volpe et al.²⁶ noted the necessity for cultural awareness to enable clinical services to be delivered effectively to rural populations. Additionally, Indigenous staffs should be positioned as educational leads for this training. Wright²⁹ also identified that Indigenous facilitators are important figures to provide cultural perspectives. Saurman et al.²⁸ in their descriptive analysis of 3 years of service activity data also highlighted the importance of staff receiving cultural education in the context of delivering telehealth-based emergency mental health services. Findings by Chavira et al.²⁴ indicated that there is a reluctance to take up telehealth-based services in the absence of cultural factors being considered. Lalani et al.³⁶ from their participatory study of 37 community influencers and service providers found that role shifting strategies require support and leadership

from community as well as a rural focus. This rural cultural focus was also identified by Gillespie⁴⁵ where recruitment of staff with previous exposure to rural settings improved recruitment.

3 | CONCLUSION

This scoping review aimed to identify workforce characteristics, barriers and enabling mechanisms to mental health service provision to address child mental illness and behavioural conditions in rural, regional and remote areas. The breadth of retained studies confirmed that providing mental health services to meet the needs of this population is an international challenge. Additionally, findings suggest the nature of these challenges are also shared across countries. These included low levels of mental health literacy, fragmented communication and service provision and workforce lacking cultural competency for Indigenous and rural contexts.⁴⁶ Importantly, the thematic analysis of the review findings highlighted four workforce strategies to potentially mitigate some of these challenges.

The utilisation of videoconferencing rural mental health services is not new, even in the context of CAMH service. However, the thematic analysis clarified important mechanisms that either facilitate or inhibit the effectiveness of technology delivered services and workforce education. Rural communities need reliable and sustainable internet access and the participating workforce needs training in and commitment to IT driven services and education. From cultural perspectives participating in telehealth needed vouching and leadership from the Indigenous community.⁴⁶ Cultural competency toward rural contexts was also pivotal. Achieving a culturally appropriate CAMH services is not without challenges. While utilising an Indigenous workforce would assist in the delivery of culturally competent services,⁴⁷ many staff are unaware of their own culture (worldviews, biases) let alone the community culture and protocol. There is also a lack of culturally responsive frameworks and policies. The prevalence of racism is a key contributor to poor retention of Indigenous health professionals.⁴⁸ Using co-design and co-production strategies with service systems and communities work as partners in the planning, management, delivery and evaluation of what, how, when and where services are delivered would be best practice to integrate both Indigenous and rural cultural perspectives.

AUTHOR CONTRIBUTIONS

John Hurley: Conceptualization; investigation; formal analysis; writing – original draft. **Bindi Bennett:**

Formal analysis; writing – original draft. **Jacqui Yoxall:** Conceptualization; funding acquisition; writing – review and editing. **Marie Hutchinson:** Writing – review and editing; formal analysis. **Paula Longbottom:** Data curation; methodology; investigation; writing – original draft. **Kitty-Rose Foley:** Formal analysis; writing – review and editing. **Brenda Happell:** Conceptualization; funding acquisition; writing – review and editing. **Jill Parkes:** Conceptualization; methodology; data curation. **Kate Curry:** Formal analysis; writing – review and editing.

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None.

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