

RESEARCH

Open Access



# Validated and culturally specific screening tools and early response programs for the detection and prevention of eating disorders among First Nations peoples in Australia: a scoping review

Mark John Castro<sup>1\*</sup>, Zyana Gall<sup>2</sup>, Alana Gall<sup>2</sup>, Hilary Smith<sup>3</sup> and Kanita Kunaratnam<sup>1</sup>

## Abstract

**Background** Eating disorders (EDs) are complex mental health conditions that can have severe health consequences, exacerbating the overall disease burden and causing significant economic impacts on healthcare systems. Globally, cultural and societal factors influence the presentation and management of these disorders, necessitating culturally specific approaches to screening and prevention. Among First Nations peoples in Australia, the intersection of historical, cultural, and social factors offers both context and strength in addressing EDs, while also presenting distinct challenges in identification and prevention.

**Objective** This scoping review seeks to map and evaluate existing research on culturally specific and validated screening tools and early response programs tailored for the prevention and detection of EDs among the First Nations population in Australia. The goal is to acquire relevant information and identify gaps that need to be addressed in the literature to develop standardised screening tools and early response programs that are validated, effective, and culturally sensitive.

**Design** A literature search was conducted through seven online academic databases (PubMed, MEDLINE, PsycINFO, Scopus, Web of Science, CINAHL, and Informit) and included publications from 2009 to 2024. The search strategy focused on ED prevention strategies among First Nations peoples in Australia, with emphasis on screening tools and early response programs.

**Results** The scoping review found no culturally specific and validated screening tools and early response programs exist that have been specifically developed for First Nations peoples in Australia. After removing the cultural specificity criterion, seven studies were found that utilised six different screening tools and one early response program. Participant demographics across these studies were predominantly Caucasians or non-Indigenous, with First Nations individuals being underrepresented in sample sizes.

---

Zyana Gall and Alana Gall are First Nations person.

\*Correspondence:

Mark John Castro

mcastro@our.ecu.edu.au

Full list of author information is available at the end of the article



© The Author(s) 2025. **Open Access** This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, which permits any non-commercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if you modified the licensed material. You do not have permission under this licence to share adapted material derived from this article or parts of it. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

**Conclusion** The findings reveal significant gaps in literature on culturally specific screening tools and early response programs for eating disorders among First Nations peoples in Australia. Existing studies often underrepresent these populations and rely on tools designed for non-Indigenous groups, questioning the generalisability of the effectiveness to First Nations peoples in Australia. This review emphasises the need for future research to adopt culturally competent methodologies led by First Nations peoples. Developing culturally specific tools and programs is crucial for improving health outcomes and achieving equitable mental health within Australian healthcare systems, ensuring that resources are justly distributed.

### Plain English Summary

Eating disorders (EDs) are serious mental health conditions that affect people differently based on their cultural background. This research looked at how First Nations peoples in Australia are supported in detecting and preventing eating disorders. We found that most tools and programs used today were designed for non-Indigenous communities and do not consider the unique cultural needs, histories, and strengths of First Nations peoples. Our team reviewed existing studies and found no tools or programs specifically created for First Nations communities. Even when we included general tools, very few First Nations peoples were part of the research - on average, only 6% of participants. This makes it hard to know if these tools or programs work well for their needs. This gap in culturally safe resources can lead to unequal health outcomes. We urge researchers and healthcare systems to partner with First Nations communities to develop tools and programs that respect their cultural values. By centring First Nations voices and leadership, we can create better solutions that truly meet their needs. Together, we can work toward fairer mental health care for all.

## Introduction

### Rationale

The prevalence of eating disorders (EDs) among Aboriginal and Torres Strait Islander peoples (hereafter, respectfully First Nations peoples) is a growing concern [10, 13]. Compelling epidemiological evidence underscores this urgency: studies indicate significantly higher prevalence rates of EDs among First Nations Australians compared to non-Indigenous Australians, affecting both adolescents (28.6% vs 21.7%) [14] and adults (27% vs lower rates) [15]. Furthermore, these disorders are associated with poorer psychosocial quality of life and mental health outcomes within these communities [14, 15]. This pattern of elevated risk among Indigenous populations is not unique to Australia but reflects a broader global phenomenon observed in colonised countries [38].

Current research on EDs predominantly reflects Western-centric perspectives and diagnostic frameworks [27], which may fail to adequately capture the phenomenological experience and expression of disordered eating within First Nations and other Indigenous contexts, as highlighted by the lack of community consultation and culturally adjusted protocols in much of the existing literature [38]. This disconnect is critical, as evidenced by findings like the significantly higher prevalence of Other Specified Feeding or Eating Disorder—Night Eating Syndrome (OSFED-NES) among First Nations adolescents [14], suggesting potential cultural variations in symptom presentation. Consequently, there is a critical need for tools that respect and integrate cultural values, practices,

and community understandings [14, 15, 38]. Existing literature suggests that culturally safe practices can lead to improved health outcomes across various health domains for First Nations peoples [40]. However, specific evidence regarding EDs remains sparse. Crucially, Mitchison et al. [38] and Burt et al. [13–15] studies consistently identify the lack of culturally specific, validated screening tools for EDs among First Nations peoples as a major gap.

Burt et al.'s [13] scoping review specifically aimed to determine the volume and content of available research and identify if any culturally specific screening or diagnostic tools exist for ED assessment in the First Nations population. While their review provides a valuable overview, several limitations warrant an updated and more comprehensive review. First, their search strategy did not explicitly include keywords related to screening tools, potentially missing relevant literature. Second, the review did not specifically search for early response programs. Lastly, the search terms did not incorporate community-relevant language (e.g., "body shame," "food shame"). These terms are crucial for understanding the cultural context of EDs and related issues within First Nations communities and may have led to the omission of relevant qualitative or community-based studies.

Given these limitations and the time elapsed since Burt et al.'s [13] publication, and the persistent calls from Mitchison et al. [38] and Burt et al. [13–15] for culturally appropriate instruments and treatments, it is essential to determine if there have been any advancements in screening tools that were previously unrecognised or

have been developed in the last five years. Our scoping review will provide insight into whether the research landscape has evolved, particularly any developments that may have been made in response to these identified gaps. By employing a broader search strategy, our research acknowledges and aims to mitigate these limitations, potentially capturing relevant studies or developments that Burt et al.'s approach may have missed. Investigating a wider array of sources and domains may reveal emerging tools, programs, or data [55] that have arisen in the last five years, contributing to a more comprehensive understanding of the situation. This study will not only assess the existence of culturally validated and specific screening tools and early response programs for ED prevention but also their effectiveness as it is critical to determine whether the existing frameworks—if they exist—are indeed helpful [7] in identifying and reducing ED in First Nations populations. Furthermore, our study will also focus on identifying gaps in the current literature in the aim to steer future research in culturally appropriate and effective formats. Finally, systematic reviews focus on specific questions, whereas scoping reviews are ideally suited for identifying the range of available evidence when studying emerging areas with limited research [45]. Therefore, a scoping review is appropriate to explore this broad and complex area.

**Objective**

This scoping review aims to explore the following research questions:

1. What screening tools have been used to detect EDs among First Nations peoples?
2. What prevention programs have been used to intervene in groups/communities where EDs have been identified?
3. Have the current screening tools and early response programs used among First Nations peoples been

effective in screening, identifying and reducing EDs in these communities?

4. Have the screening tools and early response programs been culturally adapted and suited to First Nations peoples?
5. What are the identified gaps in research, and where should future studies focus to advance culturally responsive mental health practices for First Nations peoples?

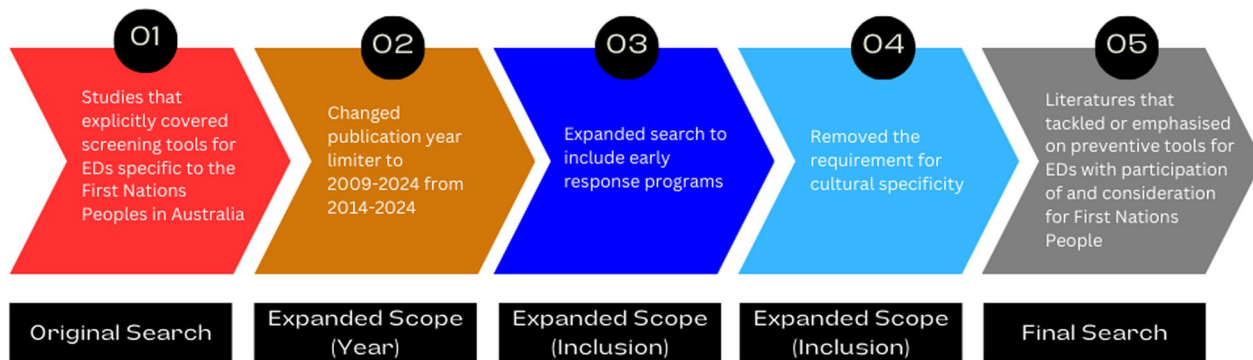
**Methods**

**Protocol and registration**

This scoping review follows the systematic multi-stage framework outlined by Arksey and O'Malley [3] and enhanced by Levac et al. [34]. It was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) guidelines from the latest Joanna Briggs Institute (JBI) guidance for scoping review [45]. The review protocol was developed prior to commencing the literature search and registered on 30 June 2022 with Open Science Framework [30].

**Eligibility criteria**

The review's initial aim was to find ED screening tools and early response programs employed in the last 10 years (2014–2024) that were validated and specific to or aligned with First Nations peoples' needs. However, no ED prevention programs were identified in our searches. As a result, we expanded our search from 2009, included early response programs, and excluded the requirement for cultural specificity. Figure 1 shows the search inclusion process that we undertook to reach the final eligibility criteria (Table 1).



**Fig. 1** Search process

**Table 1** Inclusion and exclusion criteria

	Inclusion	Exclusion
Publication year	2009 to 2024	Before 2009
Language	English	Non-English
Population	<ul style="list-style-type: none"> <li>• Data related to First Nations populations, including subsets or the entire sample</li> <li>• In studies involving diverse ethnic groups, results are presented stratified by ethnicity</li> <li>• Data considered First Nations perspective and health status</li> <li>• All ages</li> </ul>	<ul style="list-style-type: none"> <li>• Did not explicitly mention the involvement of First Nations people as participants</li> <li>• Did not consider First Nations perspective and health status</li> </ul>
Concept	Addressed or emphasised on screening tools or early response programs for prevention of EDs	Studies that did not explicitly cover screening tools or early response programs for prevention of EDs but instead covered other concepts such as diagnostic tools
Publication status/type	<ul style="list-style-type: none"> <li>• Quantitative and qualitative study designs</li> <li>• Peer-reviewed journal articles</li> <li>• Grey literature (e.g., Google Scholar, government and Non-Governmental Organisation reports)</li> </ul>	<ul style="list-style-type: none"> <li>• Review papers (e.g., systematic and scoping), protocol papers, translational action research</li> <li>• Research articles from non-peer-reviewed journals</li> <li>• Theses, commentaries, letters, newsletters, opinion or reflection pieces, book chapters, book reviews, presentations or conference abstracts</li> <li>• Non-retrievable literature</li> </ul>

**Information sources**

The literature search was conducted through seven online academic databases: PubMed, Medical Literature Analysis and Retrieval System Online (MEDLINE), PsycINFO, Scopus, Web of Science, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Informit (Indigenous Collection). Additionally, grey literature was identified through Google Scholar and Australian Indigenous HealthInfoNet. The most recent search was executed on December 16, 2024. To ensure thoroughness, reference lists of included studies and relevant reviews were scanned for additional sources. References were managed using EndNote 20.6 software [51].

**Search**

The primary author conducted the literature search with the guidance of an experienced librarian, using the Peer Review of Electronic Search Strategies (PRESS) checklist [52]. The literature search was guided by using the key terms under each component of Population, Concept, and Context (PCC) method [44]. Table 2 shows the key search terms utilised in this study.

Moreover, our search included terms related to EDs pertinent to First Nations peoples such as ‘body image’ and ‘shape overvaluation’ [13], alongside common clinical ED terms (e.g., anorexia, bulimia) and community-focused terms such as body shame, food shame and weight stigma. First Nations-specific search terms were informed by Gall et al. [22], including ‘Indigenous’, ‘Aboriginal’, ‘Torres Strait Islander’, ‘First Nations’, and ‘First People’.

Table 3 in the Supplementary material shows the full electronic search strategy used for the databases where

subject headings are available, noting the search utilised the publication year and ‘peer-reviewed’ as limiters, if applicable.

**Sources of evidence selection process**

The selection process involved multiple stages: initial screening of titles and abstracts, followed by full-text review. Two independent reviewers (MJC, KK) conducted the screening process, utilising the inclusion and exclusion criteria to ensure reliability. Moreover, the study protocol was that discrepancies would be resolved through discussion or consultation with a third reviewer (AG, ZG or HS) if consensus was not achieved initially.

**Results**

Table 3 shows the characteristics of the seven studies considered eligible for inclusion in this review as per the study selection flow diagram (Fig. 2). Of these studies, only one assessed the efficacy of an early response program, whereas others focused on screening tools.

Although all these studies yielded insightful findings regarding EDs and included First Nations peoples’ participation, none have focused on and evaluated the effectiveness and validity of ED screening tools and early response programs specific to the First Nations population.

**Participant demographics**

The scarcity of studies has evidenced a dearth of literature regarding approaches to ED prevention, screening, detection and response, that are specific and valid to First Nations peoples. Majority of the participant demographics within studies reviewed comprised mostly Caucasians,

**Table 2** Search terms

Population	Concept 1	Concept 2	Concept 3	Context
Aborigin* OR "Torres Strait" OR Indigenous OR "First Nation*" OR "First People*"	"Eating Disorder*" OR Anorexi* OR Bulimi* OR "Binge eat*" OR "body image" OR "body dysmorphia" OR "muscle dysmorphia" OR "weight overvaluation" OR "shape overvaluation" OR "shape valuation" OR "weight bias" OR "weight bias stigma*" OR "weight stigma" OR "body shame" or "food shame"	Screen* OR prevent* OR early intervent*	Tool* OR instrument* OR program*	Australia*

**Table 3** Characteristics of included sources of evidence (n = 7)

Author/s, year, country	Study focus/aim	Setting	Screening tools or early response program employed relating to EDs	Participants profile, ethnicity, gender, age (& proportion)	Results summary relating to ED and/or First Nations people
Cinelli and O'Dea [18], Australia	Relationship between body image and body weight	Metropolitan, regional and rural primary and secondary schools	A questionnaire, which was validated against several scales on the EDI tool, measuring weight perceptions, body image, desired weight, and weight control behaviours	Aboriginal and Torres Strait Islander (7%), Anglo-European (93%) Male/Female, 12–16 years	<ul style="list-style-type: none"> <li>Aboriginal youth were more likely to desire and pursue weight gain compared to non-Indigenous counterparts</li> <li>Indigenous males showed the greatest tendency to want to gain weight and build up their bodies</li> <li>Poor body image among adolescents living with higher weight was similar across all groups</li> </ul>
Hughes et al. [32], Australia	Establish normative data on ED symptoms, drive for muscularity, and muscle dysmorphia in men, and identify patterns/subtypes	Metropolitan community	EAT-26, EDE-Q, CIA Questionnaire, DMS, and MDI	Caucasian (84.9%), Asian (9.9%), Indian (1.7%), Asian-Caucasian (1.7%), Aboriginal (0.9%), Hispanic (0.4%), African (0.4%) Male only, 19–84 years	<ul style="list-style-type: none"> <li>Internal consistency was strong for most scales, except for the MDI</li> <li>EDE-Q has better internal consistency than EAT-26</li> <li>Positive correlation between ED and MD measures</li> <li>Two main typologies identified i.e., muscularity-driven and thinness-driven</li> <li>BMI not related to higher levels of ED or MD symptoms</li> <li>Significant correlation between CIA and both ED and MD measures</li> <li>Similarity and difference in ED and MD measures between Australian sample and other countries</li> <li>Results were generalised and not specific to the First Nations People in Australia</li> </ul>

**Table 3** (continued)

Author/s, year, country	Study focus/aim	Setting	Screening tools or early response program employed relating to EDs	Participants profile, ethnicity, gender, age (& proportion)	Results summary relating to ED and/or First Nations people
Riley et al. [46], Australia	Effectiveness of mindfulness and acceptance-based group program	Prison, South Australia	10-session group program employing ACT, and using PHQ-ED as one of the baseline measurement tools	Heterogenous, including Indigenous Australians (2.2%), most were born in Australia (86.9%), others in NZ (4.9%), Africa, China, Brazil, Holland, Bosnia	<ul style="list-style-type: none"> <li>• Improvements in mindfulness and acceptance and reduction in anxiety, depression, and somatoform disorders among the participants</li> <li>• Potentially greater improvements in anxiety and mindfulness measures among Indigenous women</li> <li>• ED indication using PHQ-ED reduced from six at baseline to two at the end of the program</li> <li>• ACT program has been demonstrated to be an acceptable initiative among the First Nations participants</li> </ul>
Bryant et al. [10], Australia	Development and pilot validation of a novel digital screening tool for high risk and early stage EDs to drive early prevention and reduced morbidity	Online	IOI-S and used EDE-Q and SCOFF to test its reliability and validity	<p>Aboriginal and Torres Strait Islander people (1.4%), Caucasian (77.8%), Asian (1.3%), Middle Eastern (1%), Pacific Islander (0.3%), Hispanic (2%), African (1.26%), Other (not specified) (3.2%)</p> <p>Male/Female, 14–74 years</p>	<ul style="list-style-type: none"> <li>• Strong positive correlation of IOI-S screening tool with SCOFF and EDE-Q</li> <li>• IOI-S accurately distinguished probable EDs</li> <li>• IOI-S demonstrated high internal consistency and test-retest reliability</li> <li>• Higher levels of ED symptoms among those identifying as Aboriginal, Torres Strait Islander, Hispanic, African, or Middle Eastern than those identifying as Caucasian, Asian, or Pacific Islander</li> </ul>

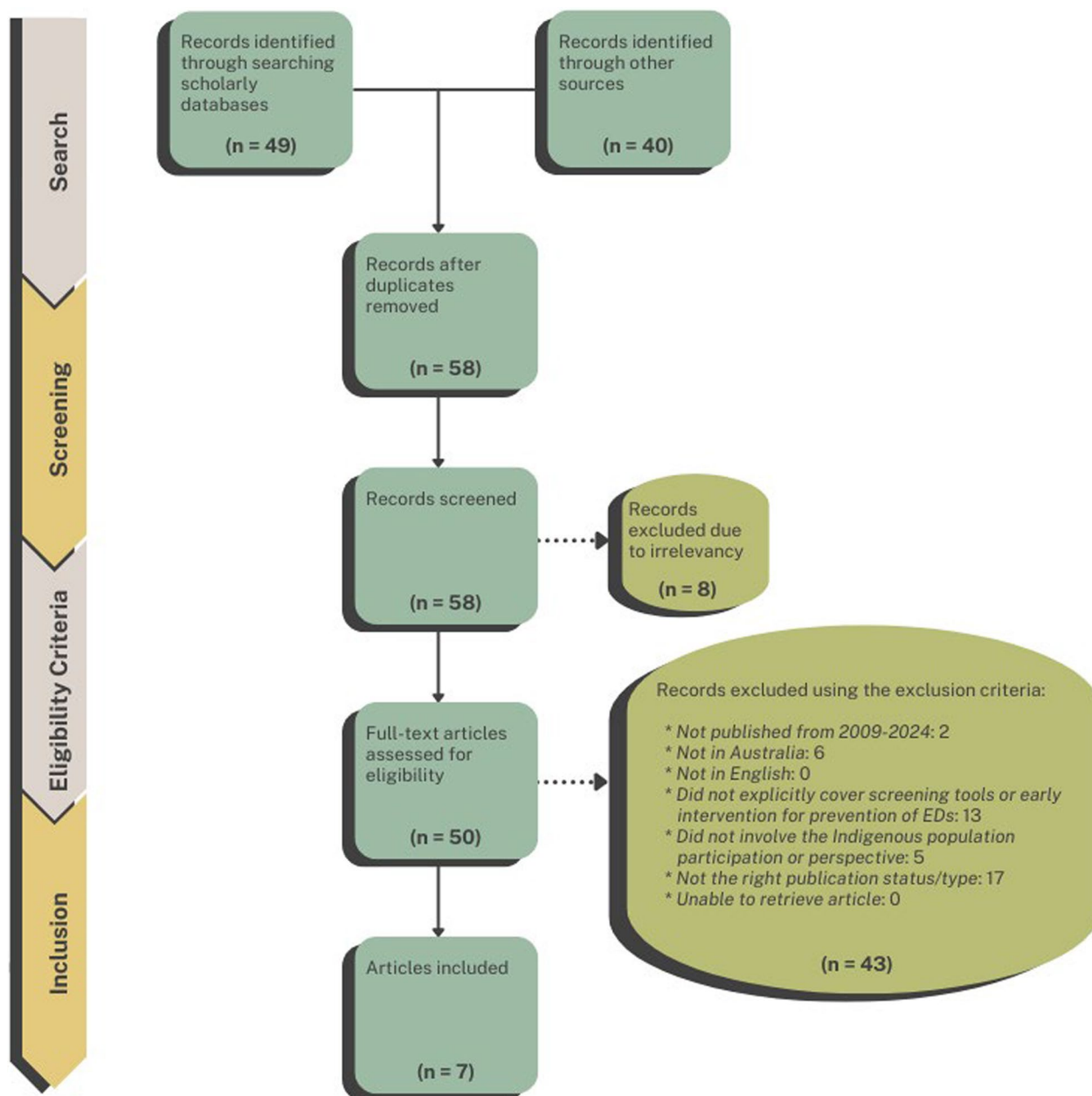
**Table 3** (continued)

Author/s, year, country	Study focus/aim	Setting	Screening tools or early response program employed relating to EDs	Participants profile, ethnicity, gender, age (& proportion)	Results summary relating to ED and/or First Nations people
Hart et al. [28], Australia	Association of ED risk with videoconferencing performance during COVID-19	Online	SCOFF	White (52%), Asian (35.9%), Male/Female, 17–76 years Hispanic (1.6%), Middle Eastern (1.1%), African American (0.3%), Aboriginal Australian (0.3%), Other (not specified) (8.8%)	<ul style="list-style-type: none"> <li>• Almost 40% were considered at-risk of EDs</li> <li>• Those at-risk individuals varied significantly from non-at-risk peers in demographic and health characteristics, except for average BMI and videoconferencing habits</li> <li>• At-risk individuals were typically younger, White females who identified as non-heterosexual and were single/unpartnered; although these attributes (except for non-heterosexuality) form most of the cohort</li> <li>• People at risk of EDs experienced more difficulties with videoconferencing outcomes compared to those not at risk</li> <li>• Results were generalised and not specific to the First Nations peoples in Australia</li> </ul>
Bryant et al. [11], Australia	To develop a minimum dataset and lay the groundwork for a national registry for EDs in Australia	Online	EDE-Q, EDE-A, BEDS-7, PARDI-AR-Q, NIAS	Different organisations including two Aboriginal and Torres Strait Islander peak organisations	<ul style="list-style-type: none"> <li>• Experts' preferred assessment tools for adult EDs:                             <ul style="list-style-type: none"> <li>- AN/BN/OSFED: EDE-Q (75%+)</li> <li>- BED: BEDS-7 (42.5%)</li> <li>- ARFID: Nine Item ARFID Screen (54.5%)</li> </ul> </li> <li>• Pica/Rumination Disorder: PARDI-AR-Q (24%)</li> <li>• Experts' preferred assessment tools for children EDs:                             <ul style="list-style-type: none"> <li>- AN/BN/BED/OSFED: EDE-A (56–76%)</li> <li>- ARFID/ Pica/Rumination Disorder: EDE-Q (80%)</li> </ul> </li> <li>• Results were generalised and not specific to the First Nations peoples in Australia</li> </ul>

**Table 3** (continued)

Author/s, year, country	Study focus/aim	Setting	Screening tools or early response program employed relating to EDs	Participants profile, ethnicity, gender, age (& proportion)	Results summary relating to ED and/or First Nations people
Bryant et al. [12], Australia	Test the reliability of the face-to-face, clinician delivery of a previously validated, co-designed, online screening tool for EDs	Primary healthcare and Clinical, New South Wales and Northern Territory	IOI-S	Aboriginal and Torres Strait Islander people (6%), Caucasian (74.7%), Asian (9.6%), Middle Eastern (2.4%), Other (not specified) (7.2%)	<ul style="list-style-type: none"> <li>• IOI-S demonstrated excellent test-retest reliability (ICC = 0.980) and robust internal validity</li> <li>• Results were generalised and not specific to the First Nations peoples in Australia</li> </ul>

ACT, acceptance and commitment therapy; AN, anorexia nervosa; ARFID, avoidant restrictive food intake disorder; BAS-2, body appreciation scale-2; BED, binge eating disorder; BEDS-7, binge eating disorder screener 7; BMI, body mass index; BN, bulimia nervosa; CIA, clinical impairment assessment; DMS, drive for muscularity scale; EAT-26, eating attitudes test-26; ED, eating disorder; EDs, eating disorders; ED-CBQ-R, eating disorder core beliefs questionnaire revised; EDE-A, eating disorder examination-adolescence; EDE-Q, eating disorder examination-questionnaire; EDE-QS, eating disorder examination questionnaire short; EDI, eating disorder inventory; IBSS-R, ideal body stereotype scale revised; ICC, intraclass correlation coefficient; IOI-S, insidious institute screener; IOI-S, insidious institute screener; M, mean; MD, muscle dysmorphia; MDI, muscle dysmorphia inventory; NIAS, nine-item arfid screen; OSFED, other specified feeding or eating disorder; PARDI-AR-Q, pica rumination disorder interview questionnaire; PHQ-ED, patient health questionnaire-binge eating disorder; SCOFF, sick, control, one stone, fat, food; SD, standard deviation



**Fig. 2** Sources of evidence selection flow diagram

and only a small proportion of First Nations peoples were included in population samples. For instance, participants who identified as Aboriginal in Hughes et al. [32] and Hart et al.’s [28] studies only accounted for less than 1% of the sample population. Similarly, Bryant et al. [10] and Cinelli and O’Dea [18] included around 1% and 7% First Nations participants in their studies, respectively. On average, First Nations participants only accounted for 6% of the study sample population, with the highest proportion (22%) found in Riley et al.’s [46] study, which only

focused on female prisoners. To put this in perspective, there is a 96:4 ratio of Caucasians to First Nations participants in the studies overall.

**Screening tools and cultural specificity of findings**

Different tools were preferred and used across the included studies. These were: 1) SCOFF (Sick, Control, One Stone, Fat, Food) questionnaire, 2) Eating Attitudes Test (EAT-26), 3) Patient Health Questionnaire–Binge Eating Disorder (PHQ-ED), 4) Nine-Item Avoidant

Restrictive Food Intake Disorder (NIAS), 5) a survey questionnaire validated against Eating Disorder Inventory (EDI) scales, and 6) the InsideOut Institute Screener (IOI-S).

However, each of these tools measured different outcomes. For instance, in Hughes et al.'s [32] study, the EAT-26 was used to establish a correlation between EDs and muscle dysmorphia. In contrast, SCOFF was either used to validate a new screening tool (IOI-S) in Bryant et al.'s [10] study or screen for EDs and its association with videoconferencing performance due to appearance concern [28]. Owing to this, SCOFF and EAT-26 were used to screen the general risk of EDs. On the other hand, NIAS and PHQ-ED are more targeted as they are designed to screen specific EDs; in this case, they were used for Avoidant Restrictive Food Intake Disorder (ARFID) and Binge Eating Disorder (BED), respectively.

Although evaluations were made between some of the tools, such as between EAT-26 and Eating Disorder Examination-Questionnaire (EDE-Q) [32], and between SCOFF and IOI-S [10], there is no gold standard for assessing ED risk and validating other tools, old and new. However, some studies revealed findings specific to First Nations, including: 1) First Nations adolescents were more likely to want to gain weight and take steps to achieve this compared to their non-Indigenous peers [18], and 2) those identifying as Aboriginal, Torres Strait Islander, Hispanic, African, or Middle Eastern showed higher levels of ED symptoms than those identifying as Caucasian, Asian, or Pacific Islander [10]. In contrast, Hart et al. [28] described the ED 'at-risk' individuals in their study as predominantly young, White females.

#### **Early response programs and cultural specificity of findings**

The scoping review identified only one study [46] that evaluated the use of 10-session protocol based on Acceptance and Commitment Therapy (ACT) as an early response program. This pilot study focused on incarcerated women in Australia, noting that they are a population with complex mental health needs and included a subset of First Nations participants. While the study's narrow demographic scope limits generalisability to the broader population—including specific groups such as First Nations peoples—its findings offered tentative but encouraging insights. The study highlighted the acceptance of the ACT by the First Nations participants, who also had better outcomes concerning anxiety and mindfulness compared to the other participants. However, due to the limited number of cases involving EDs in this study, a statistical analysis of the outcome was not feasible. A key strength of the initiative was the involvement of an Aboriginal Project Officer, who played a pivotal role in encouraging engagement and cultural safety for the

First Nations participants. This was important to the success of this initiative, highlighting the need to prioritise First Nations-led co-design in future initiative and program development.

#### **Discussion**

This scoping review aimed to map and evaluate the existing research on culturally specific and validated screening tools, as well as early response programs tailored for the prevention of EDs among First Nations peoples in Australia. Ultimately, the review found a significant gap: no culturally specific and validated screening tools or early response programs have been specifically developed for this population. This underscores the critical need for culturally sensitive resources for the detection and prevention of EDs among First Nations peoples. Beyond this central finding, the review also sought to uncover relevant information and highlight gaps in the existing literature, as these insights are crucial for developing standardised screening tools and early response programs that are not only validated and effective but also culturally attuned to the unique needs of First Nations communities.

The scoping review predominantly identified literature focusing on screening tools for EDs, yet none of these studies specifically addressed the needs of First Nations peoples. This lack of specificity presents a significant gap in the existence of culturally sensitive screening tools tailored to First Nations peoples. The studies reviewed utilised a range of tools, including the SCOFF questionnaire, EAT-26, and IOI-S. However, the use of various tools across studies illustrates an absence of standardisation in screening practices, which could lead to bias and inconsistencies in how EDs are identified and managed [35, 36]. While some tools, such as SCOFF and EAT-26, are commonly used due to their general risk assessment capabilities, they have limitations and do not necessarily capture the nuanced cultural factors relevant to First Nations peoples [35, 48, 54]. For instance, the SCOFF questionnaire, while brief and easy to administer, focuses primarily on core diagnostic criteria for anorexia nervosa and bulimia nervosa [1], potentially missing atypical or subthreshold ED presentations more common in First Nations populations, like OSFED-NES among adolescents [14] and Unspecified Feeding or Eating Disorder (UFED), characterised by recurrent binge eating, among adults [15]. The EAT-26, a more comprehensive self-report measure, relies heavily on individual attitudes and behaviours related to dieting and weight control [49], which may not accurately reflect the experiences of First Nations individuals whose relationships with food and body image are shaped by distinct cultural

values, historical traumas, and socioeconomic factors [18]. Furthermore, both tools may lack sensitivity in detecting EDs in individuals who do not conform to Westernised ideals of thinness or who express distress in culturally specific ways [1, 49]. These issues are compounded by the fact that the presentation of EDs and related symptoms can differ significantly between demographic subgroups [17, 38]. While young, White females are often identified as being at-risk in Western contexts [28, 56], First Nations individuals, particularly adolescents, have shown unique patterns of ED symptoms, such as a stronger desire for weight gain, and they have also reported receiving contradictory messages from their parents regarding weight, food, and exercise [18]. These findings challenge stereotypes suggesting that First Nations peoples are less affected by EDs (Australian Broadcasting Corporation [4]) and underscore the critical need for culturally adapted screening approaches that can accurately reflect experiences specific to First Nations communities.

Despite some studies incorporating First Nations individuals, the predominance of Western-centric perspectives in ED research limits the understanding of the unique cultural and social contexts surrounding First Nations populations [21, 25]. Although, the studies provided insights into the prevalence and management of EDs per a Western, biomedical model, they often lacked the necessary cultural grounding to be effectively applied. For instance, Bryant et al. [12] are notable because they actively assessed the validity of the InsideOut Institute Screener (IOI-S) in the Australian context. However, there was no mention of First Nations people or communities being involved in the tool development. This paternalistic approach to tool development, whereby generic non-Indigenous tools are retrofitted to First Nations contexts, perpetuates the subjugation of First Nations peoples to potential harm. Brinckley et al. [8] notes that using Western methods without appropriate cultural adaptation fails to achieve the same effectiveness as developing tools within an Aboriginal and Torres Strait Islander worldview from the outset. Indeed, without meaningful involvement of First Nations peoples in the design of tools that are meant to serve them, will only maintain or further the gap in health and wellbeing outcomes. Moreover, this approach raises significant questions regarding the tool's true validity and cultural relevance, suggesting it may not adequately reflect the lived experiences and values of First Nations peoples compared to instruments designed in genuine partnership with First Nations communities [5, 43]. Thus, the inadequacies inherent in such approaches reflect broader issues within research practices that often marginalise First

Nations experiences by failing to place them at the core of the research agenda [16, 43].

The demographic data presented in this review highlights an alarming trend: the underrepresentation of First Nations participants in ED specific research studies. For example, in five studies, an average of 3% of First Nations were included in the studies. Only one study in our review [46] included a higher proportion of First Nations participants; however, this study sampled from a prison population where First Nations people are vastly over-represented [42]. While some studies inferred a higher prevalence of ED symptoms among First Nations peoples compared to their non-Indigenous counterparts, this was not supported in Hart et al.'s [28] study, which presented higher ED risk among the White population. It is critical to note the small size of the First Nations participants in the studies. This creates a potential for skewed representation that may distort the overall findings and render them less applicable to the unique needs of First Nations populations. When First Nations peoples are not sufficiently represented in the data, their specific experiences and challenges related to EDs remain obscured, and the development of relevant strategies to address their needs becomes significantly undermined [19]. This tendency for research design to position First Nations individuals as mere components of demographic diversity, rather than as central figures in the research narrative, raises critical questions about the inclusiveness and cultural sensitivity of the methodologies employed [50]. Such an approach risks perpetuating intergenerational trauma by not honouring First Nations knowledge systems and lived experiences, ultimately leading to a cycle of harm within the healthcare system [9, 40].

Comparative analysis of the tools reveals both strengths and weaknesses. Tools such as SCOFF and EAT-26 are widely recognised and allow for broad application, however, often lack sensitivity and may provide false negatives. The IOI-S attempts to address these gaps by incorporating newer validation methods, yet its development without direct First Nations' input calls into question its applicability to First Nations people. Although some evaluations between tools, such as EAT-26 and EDE-Q [32], and SCOFF and IOI-S [10], suggest correlations in broader populations, they do not extend these findings to First Nations cohorts effectively. Importantly, none of the literature mentions any concerted effort toward the standardisation of these tools, leaving a critical gap in reliable and consistent screening across diverse groups.

The review also identified only one early response program, a 10-session protocol based on ACT, highlighting another significant gap in the literature. This scarcity makes it difficult to evaluate or compare its effectiveness

comprehensively, particularly for First Nations peoples. The minimal focus and lack of prevention programs may stem from a lack of understanding of how these programs should be developed or structured [24] for First Nations communities. Moreover, poorly targeted initiatives preclude engagements from groups such as the First Nations peoples [23]. This oversight suggests a broader need for research and development in early response initiatives that are culturally appropriate and responsive to the unique contexts of First Nations peoples. Notably, ACT demonstrated high acceptability among First Nations participants, which is a critical factor given the historical mistrust that many First Nations communities have developed toward Western mental health initiatives due to a history of colonisation, cultural dislocation, and harmful practices perpetrated by these institutions [26, 53]. It also highlights the importance of collaboration with First Nations professionals and community members for the success of mental health programs targeting First Nations peoples. Moreover, the feasibility and acceptability of ACT in this setting highlights its potential as a culturally adaptable framework for addressing intergenerational trauma and mental health inequities. In First Nations communities, historical traumas—such as colonisation, forced removals, and systemic discrimination—can significantly impact mental health and coping strategies [20]. By offering a therapeutic framework that is acceptable within these communities, ACT can facilitate individuals' engagement with their mental health needs while acknowledging and addressing the complexities of their lived experiences. Nevertheless, further research is urgently needed to explore: 1) whether the benefits of the program extend to the non-incarcerated First Nations people regardless of confounding factors such as age and gender, 2) the long-term sustainability of ACT outcomes in First Nations contexts, and 3) the role of cultural adaptation, i.e., integrating traditional healing practices [37] in enhancing ACT's efficacy for First Nations peoples.

Additionally, the considerable intersection between food insecurity (FI) and EDs presents an important avenue for future exploration [29, 33, 39]. Food insecurity is a pressing issue affecting many First Nations communities, complicating their efforts to maintain both physical and mental health [6, 41]. Although this review primarily focused on EDs, the contextual factors influencing First Nations populations, especially concerning access to adequate and culturally appropriate food, must not be overlooked. Existing screening tools for both EDs and FI often operate in silos, failing to recognise the complex nature of health for First Nations peoples and the specific interrelationships between FI, stress and ED symptomatology. Therefore, there is a critical need for research that

not only examines EDs but also considers the potential implications of FI as a contextual risk factor with unique implications for First Nations peoples [29, 31]. Developing tools that effectively screen for both EDs and FI could provide a holistic view of the challenges facing First Nations communities. By adopting a blended approach to screening and initiatives that incorporates both ED and FI considerations, researchers can enhance the cultural responsiveness of their work and ultimately contribute to more comprehensive support for individuals at risk.

To address these challenges effectively, future research must embrace Indigenist methodologies that prioritise the leadership and involvement of First Nations communities at every stage of the research process [16, 25, 43]. This could include employing participatory action research approaches, which empower communities to take an active role in defining the research questions and outcomes that matter most to them [2, 21]. An epistemically humble approach—one that acknowledges the legitimacy of First Nations ways of knowing, being, and doing—can facilitate a more profound integration of diverse perspectives into the development of effective screening tools and initiatives [21, 47]. Such humility encourages researchers to recognise that knowledge is not solely derived from quantitative data or clinical trials but is equally informed by cultural stories, lived experiences, community wisdom, and self-determination. By actively engaging with and focusing on First Nations knowledge systems, researchers can contribute to more culturally responsive ED preventative initiatives, thus ensuring that First Nations peoples are not merely subjects of research but valued collaborators in the pursuit of better health outcomes.

While the review has identified some promising screening tools and an early response program, the needs of First Nations populations remain largely unaddressed in the current literature. Future research must prioritise the creation of validated and culturally specific tools and programs, engaging First Nations communities throughout the research process to ensure that initiatives are effective and respectful of their cultural perspectives. Finally, this scoping review emphasises the urgent need for further research that prioritises the voices of First Nations peoples in the development and validation of screening tools and early response initiatives for EDs. By centring First Nations perspectives and employing culturally competent methodologies, researchers can create more effective health initiatives that genuinely reflect the needs and experiences of First Nations communities. This approach not only facilitates better health outcomes for First Nations peoples but also cultivates a sense of trust and collaboration

between researchers and First Nations communities, promoting long-term partnerships that can lead to sustainable changes within healthcare systems. Ultimately, a commitment to respectful research practices that honour First Nations knowledge systems is essential in overcoming the disparities faced by First Nations peoples regarding EDs and overall health.

#### Abbreviations

ACT	Acceptance and commitment therapy
AN	Anorexia nervosa
ARFID	Avoidant restrictive food intake disorder
BAS-2	Body appreciation scale-2
BED	Binge eating disorder
BEDS-7	Binge eating disorder screener 7
BMI	Body mass index
BN	Bulimia nervosa
CIA	Clinical impairment assessment
DMS	Drive for muscularity scale
EAT-26	Eating attitudes test-26
ED	Eating disorder
EDs	Eating disorders
ED-CBQ-R	Eating disorder core beliefs questionnaire revised
EDE-A	Eating disorder examination-adolescence
EDE-Q	Eating disorder examination-questionnaire
EDE-QS	Eating disorder examination questionnaire short
EDI	Eating disorder inventory
IBSS-R	Ideal body stereotype scale revised
ICC	Intraclass correlation coefficient
IOI-S	Insideout institute screener
M	Mean
MD	Muscle dysmorphia
MDI	Muscle dysmorphia inventory
NIAS	Nine-item arfid screen
OSFED	Other specified feeding or eating disorder
PARDI-AR-Q	Pica rumination disorder interview questionnaire
PHQ-ED	Patient health questionnaire–binge eating disorder
SCOFF	Sick, control, one stone, fat, food
SD	Standard deviation

#### Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s40337-025-01334-7>.

Supplementary file1.

#### Acknowledgements

We hereby acknowledge and give our respect to the Wardandi peoples of the Noongar nation, where the Edith Cowan University campuses sit; the Truwulway peoples of the NE Coast of Lutruwita country, where two of the First Nations authors (AG, ZG) are part of; and all the Traditional Owners of the Lands across Australia.

#### Author contributions

MJC is the lead author of the study not only responsible for the search, collection, extraction, analysis, interpretation, and synthesis of data but also in building the manuscript for submission. ZG contributed to appraisal of data and manuscript editing. AG contributed to appraisal of data and manuscript editing. HS contributed to appraisal and interpretation of data and manuscript editing. KK conceived the study and contributed to appraisal and interpretation of data and manuscript editing. All authors reviewed the manuscript.

#### Funding

Not applicable.

#### Availability of data and materials

No datasets were generated or analysed during the current study.

#### Declarations

#### Ethics approval and consent to participate

Not applicable.

#### Consent for publication

Not applicable.

#### Competing interests

The authors declare no competing interests.

#### Author details

<sup>1</sup>School of Medical and Health Sciences, Edith Cowan University, Perth, WA, Australia. <sup>2</sup>National Centre for Naturopathic Medicine, Southern Cross University, East Lismore, NSW, Australia. <sup>3</sup>National Eating Disorders Collaboration, Brunswick, VIC, Australia.

Received: 8 April 2025 Accepted: 5 July 2025

Published online: 04 August 2025

#### References

- Alexander T, Blair BC, Hannah C, Safiya M, Simone M. The need for more inclusive measurement to advance equity in eating disorders prevention. *Eat Disord.* 2024;32(6):798–816. <https://doi.org/10.1080/10640266.2024.2328460>.
- Anderson K, Gall A, Butler T, Ngampromwongse K, Hector D, Turnbull S, Lucas K, Nehill C, Boltong A, Keefe D, Garvey G. Development of key principles and best practices for co-design in health with First Nations Australians. *Int J Environ Res Public Health.* 2023;20(1):147. <https://doi.org/10.3390/ijerph20010147>.
- Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol.* 2005;8(1):19–32. <https://doi.org/10.1080/1364557032000119616>.
- Australian Broadcasting Corporation News (2022, December 9) Concerns Indigenous Australians missing out on eating disorder treatment. ABC News.
- Australian Institute of Health and Welfare (2013) What works to overcome Indigenous disadvantage: Key learnings and gaps in the evidence 2011–12. Produced for the Closing the Gap Clearinghouse. Australian Institute of Family Studies.
- Australian Institute of Health and Welfare (2022) Food security and Indigenous mental health. Produced for the Indigenous Mental Health and Suicide Prevention Clearinghouse. Australian Government.
- Bowen DJ, Kreuter M, Spring B, Cofta-Woerpel L, Linnan L, Weiner D, Bakken S, Kaplan CP, Squiers L, Fabrizio C, Fernandez M. How we design feasibility studies. *Am J Prev Med.* 2009;36(5):452–7. <https://doi.org/10.1016/j.amepre.2009.02.002>.
- Brinckley MM, Bourke S, Watkin Lui F, Lovett R. Knowledge translation in Aboriginal and Torres Strait islander research contexts in Australia: scoping review protocol. *BMJ Open.* 2022;12(7): e060311. <https://doi.org/10.1136/bmjopen-2021-060311>.
- Browne AJ, Varcoe C, Lavoie J, Smye V, Wong ST, Krause M, Tu D, Godwin O, Khan K, Fridkin A. Enhancing health care equity with Indigenous populations: evidence-based strategies from an ethnographic study. *BMC Health Serv Res.* 2016;16(1):544. <https://doi.org/10.1186/s12913-016-1707-9>.
- Bryant E, Miskovic-Wheatley J, Touyz SW, Crosby RD, Koreshe E, Maguire S. Identification of high risk and early stage eating disorders: first validation of a digital screening tool. *J Eat Disord.* 2021;9(1):109. <https://doi.org/10.1186/s40337-021-00464-y>.
- Bryant E, Broomfield C, Burrows J, McLean S, Marks P, Maloney D, Touyz S, Maguire S. Gaining consensus on clinical quality outcomes for eating disorders: framework for the development of an Australian national minimum dataset. *BMJ Open.* 2023;13(4): e071150. <https://doi.org/10.1136/bmjopen-2022-071150>.

12. Bryant E, Spielman K, Burton AL, Ong SH, Livney J, Corry S, Maguire S. Identifying eating disorders at the earliest opportunity: testing the reliability of an online eating disorder screener (IOI-S) in primary care and youth mental health settings. *Early Interv Psychiatry*. 2023;18:446–54. <https://doi.org/10.1111/eip.13486>.
13. Burt A, Mitchison D, Doyle K, Hay P. Eating disorders amongst Aboriginal and Torres Strait Islander Australians: a scoping review. *J Eat Disord*. 2020;8(1):73. <https://doi.org/10.1186/s40337-020-00346-9>.
14. Burt A, Mitchison D, Dale E, Bussey K, Trompeter N, Loneragan A, Hay P. Prevalence, features and health impacts of eating disorders amongst First-Australian Yiramarang (adolescents) and in comparison with other Australian adolescents. *J Eat Disord*. 2020;8(1):10. <https://doi.org/10.1186/s40337-020-0286-7>.
15. Burt A, Mannan H, Touz S, Hay P. Prevalence of DSM-5 diagnostic threshold eating disorders and features amongst Aboriginal and Torres Strait Islander peoples (First Australians). *BMC Psychiatry*. 2020;20(1):449. <https://doi.org/10.1186/s12888-020-02852-1>.
16. Butler T, Gall A, Garvey G, Ngampromwongse K, Hector D, Turnbull S, Lucas K, Nehill C, Boltong A, Keefe D, Anderson K. A comprehensive review of optimal approaches to co-design in health with First Nations Australians. *Int J Environ Res Public Health*. 2022;19(23):16166. <https://doi.org/10.3990/ijerph192316166>.
17. Cheng ZH, Perko VL, Fuller-Marashi L, Gau JM, Stice E. Ethnic differences in eating disorder prevalence, risk factors, and predictive effects of risk factors among young women. *Eat Behav*. 2019;32:23–30. <https://doi.org/10.1016/j.eatbeh.2018.11.004>.
18. Cinelli RL, O'Dea JA. Body image and obesity among Australian adolescents from Indigenous and Anglo-European backgrounds: implications for health promotion and obesity prevention among Aboriginal youth. *Health Educ Res*. 2009;24(6):1059–68. <https://doi.org/10.1093/her/cyp040>.
19. Currie GM. Yindyamarra Winhanganha: a conduit to Indigenous cultural proficiency. *J Nucl Med Technol*. 2022. <https://doi.org/10.2967/jnmt.121.262436>.
20. Darwin L, Vervoort S, Vullert E, Blustein S (2023) Intergenerational trauma and mental health. Australian Institute of Health and Welfare.
21. Dudgeon P, Bray A, Darlaston-Jones D, Walker R (2020) Aboriginal participatory action research: an Indigenous research methodology strengthening decolonisation and social and emotional wellbeing. Lowitja Institute. <https://doi.org/10.48455/smch-8z25>
22. Gall Z, Gall A, Smith H, Grant G, Kunaratnam K, Kerslake F, Lee C. Culturally responsive recommendations for eating disorder prevention and management for First Nations peoples in Australia: a policy scoping review. *J Eat Disord*. 2024;13(1):75.
23. Gall A, Smith H, Gall Z (2024) First Nations perspectives: strengthening the eating disorder safe principles. National Eating Disorders Collaboration.
24. Gharaibeh M, Al-Bakkar A-MM, Abdel-Rahman SZ, Almulla AA. Stressors and difficulties in early intervention programs in Jordan from the employee's perspective. *Int J Child Care Educ Policy*. 2024;18(1):11. <https://doi.org/10.1186/s40723-024-00137-8>.
25. Gobena EB, Hean S, Heaslip V, Studsrød I. The challenge of western-influenced notions of knowledge and research training: lessons for decolonizing the research process and researcher education. *J Ethn Cult Divers Soc Work*. 2024;33(5):276–87. <https://doi.org/10.1080/15313204.2023.2197272>.
26. Goetz CJ, Mushquash CJ, Maranzan KA. An integrative review of barriers and facilitators associated with mental health help seeking among Indigenous populations. *Psychiatric*. 2023;74(3):272–81. <https://doi.org/10.1176/appi.ps.202100503>.
27. Halbeisen G, Brandt G, Paslakis G. A plea for diversity in eating disorders research. *Front Psychiatry*. 2022;13: 820043. <https://doi.org/10.3389/fpsy.2022.820043>.
28. Hart LM, Mitchison D, Fuller-Tyszkiewicz M, Giles S, Fardouly J, Jarman HK, Damiano SR, McLean SA, Prichard I, Yager Z, Krug I. "Can you see me?" Videoconferencing and eating disorder risk during COVID-19: anxiety, impairment, and mediators. *Int J Eat Disord*. 2023;56(1):235–46. <https://doi.org/10.1002/eat.23844>.
29. Hazzard VM, Loth KA, Hooper L, Becker CB. Food insecurity and eating disorders: a review of emerging evidence. *Curr Psychiatry Rep*. 2020;22(12):74.
30. Hingst R, Alvarado DC, Bardin L, Farmer N. Occupational therapy and cooking: A scoping review and future directions. *Scandinavian J Occup Ther*. 2023;31(1):2267081. <https://doi.org/10.1080/11038128.2023.2267081>.
31. Hooper SC, Kilpela LS, Gomez F, Middlemass KM, Becker CB. Eating disorder pathology in a sample of midlife and older adults experiencing food insecurity. *Eat Behav*. 2023;49: 101742. <https://doi.org/10.1016/j.eatbeh.2023.101742>.
32. Hughes EK, Dean C, Allen JS. Measures of eating disorder symptoms, drive for muscularity, and muscle dysmorphia: norms and typologies of Australian men. *Aust J Psychol*. 2016;68(4):270–80. <https://doi.org/10.1111/ajpy.12105>.
33. Laboe AA, D'Adamo L, Grammer AC, McGinnis CG, Davison GM, Balantekin KN, Graham AK, Smolar L, Taylor CB, Wilfley DE, Fitzsimmons-Craft EE. The relation of food insecurity to eating disorder characteristics and treatment-seeking among adult respondents to the National Eating Disorders Association online screen. *Eat Behav*. 2023;50: Article 101776.
34. Levac D, Colquhoun H, O'Brien, KK. Scoping studies: advancing the methodology. *Implement Sci*. 2010. <https://doi.org/10.1186/1748-5908-5-69>.
35. Lim YH, Watkins R, Jones H, Finlay-Jones A (2021) Report on screening for fetal alcohol spectrum disorder (FASD) in Western Australia: Policy and practice recommendations. Western Australian Department of Health.
36. Marel C, Siedlecka E, Fisher A, Gournay K, Deady M, Baker A, Kay-Lambkin F, Teesson M, Baillie A, Mills KL (2022) Guidelines on the management of co-occurring alcohol and other drug and mental health conditions in alcohol and other drug treatment settings (3rd ed.). Matilda Centre for Research in Mental Health and Substance Use, The University of Sydney.
37. McKendrick J, Brooks R, Hudson J, Thorpe M, Bennett P (2017, February 2) Aboriginal and Torres Strait Islander healing programs: a literature review. Healing Foundation.
38. Mitchison D, Broderstad AR, Burt A, Kvaløy K. Eating disorders in Indigenous peoples. In: Robinson P, Wade T, Herpertz-Dahlmann B, Fernandez-Aranda F, Treasure J, Wonderlich S, editors. *Eating disorders: an international comprehensive view*. Springer International Publishing; 2023. p. 1–45.
39. Nagata JM, Chu J, Cervantez L, Ganson KT, Testa A, Jackson DB, Murray SB, Weiser SD. Food insecurity and binge-eating disorder in early adolescence. *Int J Eat Disord*. 2023;56(6):1233–9.
40. Nash D, O'Rourke T, Memmott P, Haynes M. Indigenous preferences for inpatient rooms in Australian hospitals: a mixed-methods study in cross-cultural design. *HERD Health Environ Res Des J*. 2021;14(1):174–89. <https://doi.org/10.1177/1937586720925552>.
41. National Aboriginal Community Controlled Health Organisation (2022 December) Inquiry into food security in Australia.
42. National Indigenous Australians Agency (2024) Contact with the criminal justice system. Aboriginal and Torres Strait Islander Health Performance Framework. Australian Institute of Health and Welfare. <https://www.indigenoushpf.gov.au/measures/2-11-contact-with-the-criminal-justice-system>
43. O'Brien P, Prehn R, Rind N, Lin I, Choong PFM, Bessarab D, Coffin J, Mason T, Dowsey MM, Bunzli S. Laying the foundations of community engagement in Aboriginal health research: establishing a community reference group and terms of reference in a novel research field. *Res Involv Engagem*. 2022;8(1):40.
44. Peters MDJ, Godfrey CM, Khalil H, Mclnerney P, Parker D, Soares CB. Guidance for conducting systematic scoping reviews. *Int J Evid Based Healthc*. 2015;13(3):141–6. <https://doi.org/10.1097/XEB.0000000000000050>.
45. Peters MDJ, Marnie C, Tricco AC, Pollock D, Munn Z, Alexander L, Mclnerney P, Godfrey CM, Khalil H. Updated methodological guidance for the conduct of scoping reviews. *JB I Evid Synth*. 2020;18(10):2119–26. <https://doi.org/10.11124/jbies-20-00167>.
46. Riley BJ, Smith D, Baigent MF. Mindfulness and acceptance-based group therapy: an uncontrolled pragmatic pre-post pilot study in a heterogeneous population of female prisoners. *Int J Offender Ther Comp Criminol*. 2019;63(15–16):2572–85. <https://doi.org/10.1177/0306624X19858487>.
47. Rix EF, Wilson S, Sheehan N, Tujague N. Indigenist and decolonizing research methodology. In: Liamputtong P, editor. *Handbook of research methods in health social sciences*. Springer Singapore; 2019. p. 253–67.
48. Salamanca-Buentello F, Seeman MV, Daar AS, Upshur REG. The ethical, social, and cultural dimensions of screening for mental health in

- children and adolescents of the developing world. *PLoS ONE*. 2020;15(8): e0237853. <https://doi.org/10.1371/journal.pone.0237853>.
49. Spivak-Lavi Z, Peleg O, Tzischinsky O, Stein D, Latzer Y. Differences in the factor structure of the eating attitude test-26 (EAT-26) in different cultures in Israel: Jews, Muslims, and Christians. *Nutrients*. 2021. <https://doi.org/10.3390/nu13061899>.
  50. Thambinathan V, Kinsella EA. Decolonizing methodologies in qualitative research: creating spaces for transformative praxis. *Int J Qual Methods*. 2021. <https://doi.org/10.1177/16094069211014766>.
  51. The EndNote Team (2013) EndNote 20.6. Clarivate.
  52. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, Moher D, Peters MDJ, Horsley T, Weeks L, Hempel S, Akl EA, Chang C, McGowan J, Stewart L, Hartling L, Aldcroft A, Wilson MG, Garrity C, Lewin S, Godfrey CM, Macdonald MT, Langlois EV, Soares-Weiser K, Moriarty Jo, Clifford T, Tunçalp Ö, Straus SE. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med*. 2018;169(7):467–73. <https://doi.org/10.7326/M18-0850>.
  53. Truong M, Moore E (2023) Racism and Indigenous wellbeing, mental health and suicide. Australian Institute of Health and Welfare.
  54. Westerman TG, Dear GE. The need for culturally valid psychological assessment tools in indigenous mental health. *Clin Psychol*. 2023. <https://doi.org/10.1080/13284207.2023.2247532>.
  55. Westphaln KK, Regoeczi W, Masotya M, Vazquez-Westphaln B, Lounsbury K, McDavid L, Lee H, Johnson J, Ronis SD. From Arksey and O'Malley and beyond: customizations to enhance a team-based, mixed approach to scoping review methodology. *MethodsX*. 2021;8: 101375.
  56. Williams-Ridgway A, McGowan R, McNeil S, Tuomainen H. Eating disorders in minority ethnic populations in Australia, Canada, Aotearoa New Zealand and the UK: a scoping review. *J Eat Disord*. 2025;13(1):8. <https://doi.org/10.1186/s40337-024-01173-y>.

### Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.