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Knowledge Translation in Aboriginal and Torres Strait Islander Australia: Scoping Review Protocol

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3 Knowledge Translation in Aboriginal and Torres Strait Islander Australia:
4 Scoping Review Protocol
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Abstract

Introduction

Knowledge Translation (KT) involves bridging the gaps between research knowledge and research application or practice, by sharing this knowledge with end-users. KT is increasingly being used in research with Indigenous peoples globally to address the top-down and inappropriate research approaches commonly used in Indigenous research. Employing KT in Indigenous research in Australia is an emergent field, despite Aboriginal and Torres Strait Islander people having conducted KT for generations.

A scoping review of KT literature will be conducted because there is limited evidence available which demonstrates how KT is applied in the Aboriginal and Torres Strait Islander context. Results will benefit researchers by demonstrating ways of appropriately translating research findings to end-users, including Aboriginal and Torres Strait Islander communities, researchers and policy makers. The scoping review will inform the KT definition, method and practices used in a large-scale, longitudinal cohort study of Aboriginal and Torres Strait Islander adults: the Mayi Kuwayu Study.

Methods and analysis

We will follow the scoping review method outlined by the Joanna Briggs Institute methodology for scoping reviews. We will search electronic databases and grey and hard literature. Abstracts and then full-text articles will be screened by two independent reviewers. We will include any studies that related to KT in Aboriginal and Torres Strait Islander research, regardless of the research topic. Results will be presented by publication year, Indigeneity of participants and authors (where identified), and the KT definition and method from each article will be described.

Ethics and dissemination

The Mayi Kuwayu Study has ethics approvals from the Australian Institute of Aboriginal and Torres Strait Islander Studies, 12 Aboriginal and Torres Strait Islander organisations representing all Australian States and Territories, and the Australian National University Human Research Ethics Committee. Results of the scoping review will be disseminated through peer-review publication and community workshops.

Article Summary

Strengths and limitations of this study

- This will be the first scoping review to map, report and discuss the literature on KT in Aboriginal and Torres Strait Islander Australia.
- A potential limitation of this study is that the search terms are “knowledge translation” or “knowledge exchange” or “knowledge transfer” or “knowledge mobilisation” as these are commonly used phrases in international literature. There are possibly other phrases that have been used in the literature that will not be captured in this search.
- This scoping review is limited to KT in Aboriginal and Torres Strait Islander Australia, which is necessary as the scoping review must be specific for the cultural context of an Australian national Aboriginal and Torres Strait Islander health study.
- This scoping review will not review the quality of the studies; it will provide new evidence on how KT is described and what types of methods are used in employing KT in Aboriginal and Torres Strait Islander Australia.

Introduction

Background

Indigenous peoples in colonised countries have unique cultures and socio-environmental contexts, but share a common history of being inappropriately researched, with little to no cultural acknowledgement or respect, and limited corresponding improvements in health and wellbeing outcomes as a result of the research[1-2]. This research “has neither been asked for, nor has it any relevance for the communities being studied”[3]. Historically, research has been used as a way for colonisers to regulate and control Indigenous peoples, leading to the present-day cynicism and distrust of research in many Indigenous communities[1]. The Indigenous research field, however, is shifting, with Indigenous bodies internationally recommending participatory research as a way to move from top-down research to instead involve Indigenous peoples throughout the research process[4].

At the core of participatory research is an equal research partnership where researchers and Indigenous peoples make research decisions together. These partnerships aim to shift the balance of research to have “equal-opportunity” for all involved in sharing and generating knowledge[5]. Participatory research is upheld as standard practice for Indigenous research as it aims to give Indigenous communities autonomy and agency throughout research that involves them[4]. However, while its importance is internationally understood, the implementation of participatory research varies, and specific processes of participatory research with Indigenous peoples are still unclear[5].

One process of participatory research approach is knowledge translation (KT). Our working definition of KT is that it is about bridging the gaps between research knowledge or findings, and research application or practice[6-7]. KT is the practice of sharing research knowledge with knowledge-users, who are the people, communities or organisations who use knowledge gathered by research to improve health systems, outcomes, services and products[8]. Knowledge-users may include the Indigenous communities involved in the research, academics or researchers, and policy makers. KT is therefore the dynamic and iterative process of how what researchers know becomes more widely known across populations[9].

KT and participatory research both aim to co-create knowledge through committed partnerships between knowledge-users and researchers[10]. While participatory research involves partnerships with knowledge users throughout the whole research journey, KT is just one aspect of this participatory research journey. KT is embedded in the whole research journey and occurs when research knowledge is translated to people who were involved in producing the knowledge.

While KT is a growing research field, it has been practiced in Indigenous communities for generations[11]. Aboriginal and Torres Strait Islander peoples are the first people of Australia, having lived on and from the land for tens of thousands of years. Aboriginal and Torres Strait Islander people have survived ongoing colonisation since 1788, keeping cultures, languages and customs alive and strong[12]. Aboriginal and Torres Strait Islander peoples have always used KT to pass on knowledge about health, wellbeing, culture, environmental sustainability, and all aspects of life through stories, music, dance and other practices[11]. However, the application of KT in Indigenous research in Australia is still an emergent field.

Rationale for the scoping review

Scoping reviews explore a defined body of literature, identify the type(s) of evidence available, and summarise the evidence. A scoping review was selected for this research because we are interested in mapping, reporting, and discussing KT concepts to provide an overview of the available evidence. Scoping reviews allow for a broader research question than other types of reviews, which is useful for emergent fields such as KT with Indigenous populations. A systematic review is not appropriate for this research topic because these typically “inform the development of trustworthy clinical guidelines and recommendations”[13]. Our research topic does not aim to do this – rather it seeks to give an overview of the evidence and the diversity of knowledge available in this area.

This scoping review will be conducted from May 2022. It seeks to explore the ways that KT is defined and employed in the research to inform the KT working definition, method and practices used in Mayi Kuwayu: the National Study of Aboriginal and Torres Strait Islander Wellbeing (the Mayi Kuwayu Study). The Mayi Kuwayu Study is a large-scale, national longitudinal cohort study of Aboriginal and Torres Strait Islander peoples aged 16 years and older[14]. It aims to understand the links between culture and health and wellbeing outcomes for Aboriginal and Torres Strait Islander peoples. This Study was developed for and by Aboriginal and Torres Strait Islander peoples, with their active involvement and input into the Study at every stage. The Mayi Kuwayu Study provides a holistic understanding of forces driving Aboriginal and Torres Strait Islander wellbeing through a large-scale, national, comprehensive survey capturing concepts important to Aboriginal and Torres Strait Islander peoples, as determined by them. Participant enrolment has been ongoing since October 2018 via postal questionnaire, in-community recruitment, through community partners, or completion of an online questionnaire. As of December 2021, over 10,000 Aboriginal and Torres Strait Islander people had participated in the Mayi Kuwayu Study.

A scoping review is necessary in beginning to design the KT method and practices used in the Mayi Kuwayu Study that are, from the outset, created from Aboriginal and Torres Strait Islander needs and interests, with culture at the centre. Adapting Western methods, practices, or tools does not produce the same quality of outcomes as designing methods, practices, and tools within an Aboriginal and Torres Strait Islander worldview from the outset[15]. Thus, understanding the current Aboriginal and Torres Strait Islander KT literature is critical for informing the Mayi Kuwayu Study's KT method and practice.

There are few other scoping or literature reviews on KT for Indigenous peoples internationally. Morton Ninomiya[16] conducted an international review of KT in Indigenous health research to inform their work in Canada, and Shibasaki[11] conducted an international scoping review of KT models and frameworks which could be applied in the Torres Strait. The present review will be the first to explore KT across Aboriginal and Torres Strait Islander Australia.

Methodology

This scoping review is conducted under an Indigenous research methodology. As a protocol of an Indigenous research methodology, all stages of this research will be guided by an Aboriginal and Torres Strait Islander governance committee, Thiitu Tharmmay, who are involved in the analyses, interpretations and outputs of the scoping review. While it is not possible to represent the full diversity of the Aboriginal and Torres Strait Islander population, Thiitu Tharmmay collectively represents a diversity of Aboriginal and Torres Strait Islander lived experiences, different mobs and Countries, and different research backgrounds and expertise. Governance by Thiitu Tharmmay ensures that Aboriginal and Torres Strait Islander epistemologies (ways of knowing), axiologies (ways of doing) and ontologies (ways of being) are centred throughout the review[17-18].

Methods and analysis

Objective

Our research question is: *how do you conduct KT in Aboriginal and Torres Strait Islander research fields?* Our objective is to map, report and discuss the literature on KT in Aboriginal and Torres Strait Islander Australia.

Inclusion criteria

To answer this research question, we will conduct a scoping review following methods outlined by the Joanna Briggs Institute (JBI)[13]. This method was selected due to JBI's extensive work on evidence-based tools and resources, which are updated in line with methodological developments, making these methods the leading standards of practice[19]. This method has also been implemented in other scoping reviews in Aboriginal and Torres Strait Islander research (for example, see [20]).

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3 Scoping reviews intend to have a broad scope and less restrictive inclusion criteria than other types of
4 reviews[13]. To develop our inclusion criteria, we worked with Thiitu Tharmmay. Members of Thiitu
5 Tharmmay agreed that “Knowledge Translation” is an academic and research term that may not resonate
6 with Aboriginal and Torres Strait Islander community members, but is appropriate for conducting the
7 scoping review. We also use other common KT terms used in academic and research settings. We use
8 the truncated “Aborig*” to refer to common variations of “Aboriginal”. We specify “Torres Strait” to
9 include only peoples from the Torres Strait and exclude other Islander groups. We also include
10 “Indigenous”, “First Nations” and “First Peoples” as these terms are commonly used to refer to
11 Aboriginal and Torres Strait Islander peoples in Australia. We additionally restrict to “Australia” and
12 English language only. We do not restrict to any research area to keep the scope as broad as possible.
13 The inclusion criteria for this scoping review are:

- 14 1. Population: (*“Aborig*” or “Torres Strait*” or “Indigenous” or “First Nation*” or “First
15 People*”*)
- 16 2. Concept: (*“knowledge translation” or “knowledge exchange” or “knowledge transfer” or
17 “knowledge mobilisation”*)
- 18 3. Context: (*Australia*)

21 Search strategy

22 Step 1 is an initial search in three online databases. We will use ANU SuperSearch, PubMed database,
23 and SAGE journals: Science Communication. The ANU SuperSearch search engine is an all-in-one
24 academic search engine that includes 568 electronic resources. The full list of e-resources and databases
25 is available at: <<http://library-admin.anu.edu.au/e-resources/index.html?showAll=GO>> We will use the
26 PubMed database because of its extensive citations for health, biomedical, and life sciences literature.
27 Finally, we will search in SAGE journals: Science Communication due to its focus on diffusion,
28 dissemination and communication of science. At Step 2, search results will be imported into EndNote,
29 with duplicates removed. Step 3 is a two-stage screening process by two separate reviewers, using the
30 inclusion criteria described above. Titles and abstracts will be scanned for eligibility for full text review.
31 To be eligible for full-text review, resources must be about KT, and must include Aboriginal and Torres
32 Strait Islander people in the study population. Any discrepancies will be discussed between the two
33 reviewers to come to a final decision. If a decision cannot be made, advice will be sought from an expert
34 in the Aboriginal and Torres Strait Islander health field. At Step 4, all included resources will then
35 undergo a full-text review. Finally, Step 5 involves reviewing grey and hard to find literature, by
36 searching the reference lists of included material, Indigenous research databases, and reviewing books
37 and chapters.
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40 Source of evidence selection

41 The source selection process is detailed in Figure 1.
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Presentation of evidence

Transparency and readability of the scoping review results are of utmost importance for the benefit of other Indigenous health researchers. As such, reporting of the scoping review results will follow the PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) guidelines. The PRISMA-ScR contains a 20-item checklist for reporting results of a scoping review, developed by experts following best-practice guidance on increasing quality and transparency of research. The PRISMA-ScR guidelines helps scoping review readers “develop a greater understanding of relevant terminology, core concepts, and key items”[21].

The presentation of the evidence from the scoping review will include the distribution of articles which have outlined a method of KT versus those which do not outline a KT method, by the number of articles published per year (Figure 2). It will also include evidence on the research area (e.g., health, education, social science), the KT definition and method for each study, and Indigeneity of participants (i.e., Aboriginal, Torres Strait Islander, or both Aboriginal and Torres Strait Islander). Where possible we will also report whether the article was authored by Aboriginal or Torres Strait Islander individuals and we will privilege the articles by Aboriginal and Torres Strait Islander peoples in our analyses as part of the Indigenous research methodology (Table 1).

Table 1: Overview of scoping review results

Author	Title	Research area	KT definition	KT method	Indigeneity of participants	Indigeneity of author/s
	KT as the primary focus of the research					
	KT as a component of the research					

* Indigeneity of authors is unknown

Ethics and dissemination

The Mayi Kuwayu Study has ethics approvals from the Australian Institute of Aboriginal and Torres Strait Islander Studies, the ANU Human Research Ethics Committee, and from an additional 12 State and Territory committees, including relevant Aboriginal and Torres Strait Islander organisations:

1. Aboriginal Health and Medical Research Council (AH&MRC) NSW: 1268/17
2. Aboriginal Health Research Ethics Committee SA: AHREC 04-17-723
3. ACT Health 2018/ETH/00205
4. Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS): E030/22052015
5. Australian National University Human Research Ethics Committee: 2016/787
6. Central Australian Human Research Ethics Committee (CAHREC) CA-17-2810
7. Metro South, Queensland: HREC/2019/QMS/56115
8. NT Department of Health & Menzies: 2017-2804
9. Nunkuwarrin Yunti
10. St Vincent's Hospital Melbourne HREC: 132/17
11. University of Tasmania (UTAS): H0016473
12. Western Australian Aboriginal Health Ethics Committee (WAAHEC): 787

The results of this scoping review will be disseminated through a peer-review publication and Aboriginal and Torres Strait Islander community workshops and presentations.

Conclusion

There is limited evidence available on how to appropriately conduct KT with Aboriginal and Torres Strait Islander people in Australia. This scoping review aims to map, report and discuss the available evidence on KT in Aboriginal and Torres Strait Islander Australia, to assist in understanding how KT can be conducted in the context of a large-scale national survey of health and wellbeing across Aboriginal and Torres Strait Islander communities, policy and research landscapes. The evidence from this scoping review will be incorporated into the KT strategy for the Mayi Kuwayu Study; the largest longitudinal cohort study of Aboriginal and Torres Strait Islander adults in Australia. A limitation of this scoping review was that the quality of the studies was not assessed. The scoping review does, however, benefit future researchers in Aboriginal and Torres Strait Islander cultures, health and wellbeing fields by providing guidance on how to appropriately translate their research findings to knowledge users, including communities, researchers and policy makers. These findings will be important in improving the field of Indigenous research and for researchers to build trust with Indigenous communities.

Contributorship statement

MB and RL conceptualised this work. MB drafted the manuscript. RL, SB, FWL conducted the critical review of the manuscript. All authors have read and agreed to the published version of the manuscript.

Competing interests

None declared.

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References

1. Smith LT. *Decolonizing Methodologies: Research and Indigenous Peoples*. 2 ed. United Kingdom: Zed Books 2012.
2. Walker M, Fredericks B, Mills K, et al. "Yarning" as a method for community-based health research with Indigenous women: the Indigenous Women's Wellness Research Program. *Health Care Women Int* 2014;35:1216-26.
3. Wilson S. *Research Is Ceremony: Indigenous Research Methods*. Black Point: Fernwood Pub 2008.
4. Dudgeon P, Bray A, Darlaston-Jones D, et al. *Aboriginal Participatory Action Research: An Indigenous Research Methodology Strengthening Decolonisation and Social and Emotional Wellbeing*. Melbourne: Discussion Paper, The Lowitja Institute; 2020.
5. Dadich A, Moore L, Eapen V. What does it mean to conduct participatory research with Indigenous peoples? A lexical review. *BMC Public Health*. 2019;19:1388.
6. Straus SE, Tetroe J, Graham I. Defining knowledge translation. *CMAJ* 2009;181:165-8.
7. Tait H, Williamson A. A literature review of knowledge translation and partnership research training programs for health researchers. *Health Res Policy and Syst*. 2019;17:98.
8. Canadian Institutes of Health Research. *Knowledge translation: definition*. Government of Canada. 2016.
9. Leadbeater BJ, Banister EM, Marshall EA. How-What-We-Know-Becomes-More-Widely-Known is Context Dependant and Culturally Sensitive. In: Leadbeater BJ, Banister EM, Marshall EA, eds. *Knowledge Translation in Context: Indigenous, Policy, and Community Settings*. University of Toronto Press 2011:1-12
10. Jull J, Giles A, Graham ID. Community-based participatory research and integrated knowledge translation: advancing the co-creation of knowledge. *Implement Sci*. 2017;12:150.
11. Shibasaki S, Sibthorpe B, Watkin Lui F, et al. Flipping the researcher knowledge translation perspective on knowledge use: a scoping study. *AlterNative*. 2019;15:271-80.
12. Gammage B. *The Biggest Estate on Earth*. Allen & Unwin Australia. 2012.
13. Peters M, Godfrey C, McInerney P, et al. Chapter 11: Scoping Reviews. In: Aromataris E, Munn Z, eds. *JBIManual for Evidence Synthesis* 2020.
14. Jones R, Thurber KA, Chapman J, et al. Study protocol: Our Cultures Count, the Mayi Kuwayu Study, a national longitudinal study of Aboriginal and Torres Strait Islander wellbeing. *BMJ Open*. 2018;8:1-7.
15. AIHW. *Measuring the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples*. Canberra: Australian Institute of Health and Wellbeing. 2009.
16. Morton Ninomiya ME, Atkinson D, Brascoupé S, et al. Effective knowledge translation approaches and practices in Indigenous health research: a systematic review protocol. *Syst rev*. 2017;6:1-7.
17. Moreton-Robinson A, & Walter, M. Indigenous Methodologies in Social Research. In: Walter M, eds. *Social Research Methods* 2009:1-18.
18. Rigney L-I. Internationalization of an Indigenous Anticolonial Cultural Critique of Research Methodologies: A Guide to Indigenist Research Methodology and Its Principles. *Wicazo Sa Review*. 1999;14:109-21.
19. Aromataris EM, Z. *JBIManual for Evidence Synthesis*. 2020;JBI.
20. Usher K, Jackson D, Walker R, et al. Indigenous Resilience in Australia: A Scoping Review Using a Reflective Decolonizing Collective Dialogue. *Front Public Health*. 2021;9.
21. Tricco AC, Lillie E, Zarin W, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med*. 2018;169:467-73.

Figure legends

Figure 1: Source selection process

Figure 2: Number of KT articles published each year by inclusion/exclusion of KT method

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- Articles identified in the initial search (n=)

- Duplicates removed (n=)

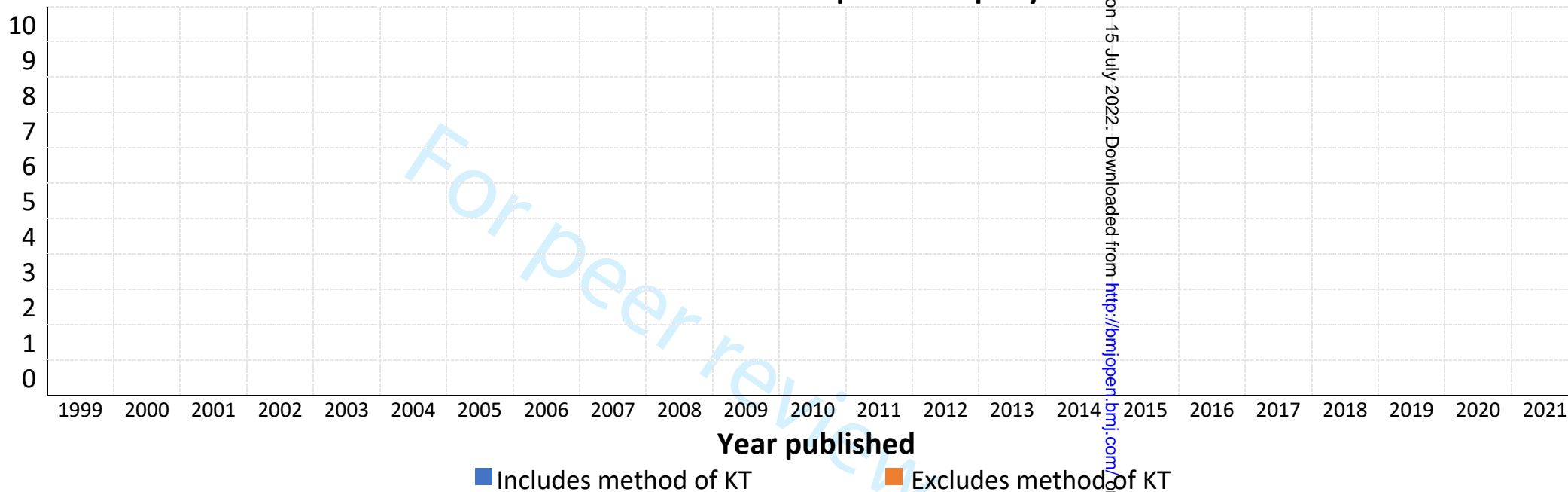
- Articles retained after title and abstract screening (n=)

- Articles retained after full text screening (n=)

- Articles included from reference list and grey literature screening (n=)

- Final articles included (N=)

Number of KT articles published per year



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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	4
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	5
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	N/A The manuscript is the protocol
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	6
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	6
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	6
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	8
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	8
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe	N/A



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
		the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	8
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	7
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	8
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	N/A
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	8
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	8
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	N/A There are no results as this is a protocol
Limitations	20	Discuss the limitations of the scoping review process.	9
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	9
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	12

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: 10.7326/M18-0850.



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Knowledge Translation in Aboriginal and Torres Strait Islander Research Contexts in Australia: Scoping Review Protocol

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Secondary Subject Heading:	Epidemiology, Communication
Keywords:	STATISTICS & RESEARCH METHODS, Protocols & guidelines < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, EPIDEMIOLOGY

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Abstract

Introduction

Knowledge Translation (KT) involves bridging the gaps between research knowledge and research application or practice, by sharing this knowledge with end-users. KT is increasingly being used in research with Indigenous peoples globally to address the top-down and inappropriate research approaches commonly used in Indigenous research. Employing KT in Indigenous research in Australia is an emergent field, despite Aboriginal and Torres Strait Islander peoples having conducted KT for generations.

There is limited evidence which demonstrates how KT is applied in the Aboriginal/Torres Strait Islander context. Results will benefit researchers by demonstrating ways of appropriately translating research findings to end-users, including Aboriginal and Torres Strait Islander communities, researchers and policy makers. The scoping review will also inform the KT definition, method and practices used in a large-scale, longitudinal cohort study of Aboriginal and Torres Strait Islander adults: the Mayi Kuwayu Study.

Methods and analysis

Under guidance of an Aboriginal and Torres Strait Islander governance committee, we will conduct a scoping review on KT in Aboriginal/Torres Strait Islander research. We will follow the scoping review method outlined by the Joanna Briggs Institute. We will search the ANU SuperSearch, PubMed, and SAGE journals: Science Communication electronic databases, and grey and hard literature in May 2022. Abstracts and full-text articles will be screened by two independent reviewers. We will include studies that related to KT in Aboriginal/Torres Strait Islander research, regardless of the research topic. Results will be used to inform the KT definition, method and practices that can be used in Aboriginal/Torres Strait Islander research contexts in Australia.

Ethics and dissemination

The Mayi Kuwayu Study has ethics approvals from the Australian Institute of Aboriginal and Torres Strait Islander Studies, 12 Aboriginal/Torres Strait Islander organisations, and the Australian National University Human Research Ethics Committee. Results will be disseminated through peer-review publication and community workshops. Protocol registration is available at osf.io/asmp6

Article Summary

Strengths and limitations of this study

- This will be the first scoping review to map, report and discuss the literature on KT in Aboriginal and Torres Strait Islander Australia.
- A potential limitation of this study is that the search terms are “knowledge translation” or “knowledge exchange” or “knowledge transfer” or “knowledge mobilisation” as these are commonly used phrases in the literature. There are possibly other phrases that have been used in the literature that will not be captured in this search.
- This scoping review is limited to KT in Aboriginal and Torres Strait Islander Australia, which is necessary as the scoping review must be specific for the cultural context of an Australian national Aboriginal and Torres Strait Islander health study.
- This scoping review will not review the quality of the studies; it will provide new evidence on how KT is described and what types of methods are used in employing KT in Aboriginal and Torres Strait Islander Australia.

Introduction

Background

Indigenous peoples in colonised countries have unique cultures and socio-environmental contexts, but share a common history of being inappropriately researched, with little to no cultural acknowledgement or respect, and limited corresponding improvements in health and wellbeing outcomes as a result of the research[1-2]. Such inappropriate research “has neither been asked for, nor has it any relevance for the communities being studied”[3]. Historically, research has been used as a way for colonisers to regulate and control Indigenous peoples, leading to the present-day cynicism and distrust of research in many Indigenous communities[1]. The Indigenous research field, however, is shifting, with Indigenous bodies internationally recommending participatory research as a way to move from top-down research to instead involve Indigenous peoples throughout the research process[4].

At the core of participatory research is an equal research partnership where researchers and Indigenous peoples make research decisions together[5]. These partnerships aim to shift the balance of research to have “equal-opportunity” for all involved in sharing and generating knowledge[5]. Participatory research is upheld as standard practice for Indigenous research as it aims to give Indigenous communities autonomy and agency throughout research that involves them[4]. However, while its importance is internationally understood, the implementation of participatory research varies, and specific processes of participatory research with Indigenous peoples are still unclear[5].

One process of participatory research is knowledge translation (KT). Our working definition of KT is that it is about bridging the gaps between research knowledge or findings, and research application or practice[6-7]. KT in research is the practice of sharing research knowledge with knowledge-users, who are the people, communities or organisations who use knowledge gathered by research to improve health systems, outcomes, services and products[8]. Knowledge-users may include the Indigenous communities involved in the research, academics or researchers, and policy makers. KT in research is therefore the dynamic and iterative process of how what researchers know becomes more widely known across populations[9].

KT and participatory research both aim to co-create knowledge through committed partnerships between knowledge-users and researchers[10]. While participatory research involves partnerships with knowledge users throughout the whole research journey, KT is just one aspect of this participatory research journey. KT is embedded in the whole research journey and occurs when research knowledge is translated to people who were involved in producing the knowledge.

While KT in research is a growing field, it has been practiced in Indigenous communities for generations[11]. Aboriginal and Torres Strait Islander peoples are the First People of Australia, having lived on and from the land for tens of thousands of years. Aboriginal and Torres Strait Islander people have survived ongoing colonisation since 1788, keeping cultures, languages and customs alive and strong[12]. Aboriginal and Torres Strait Islander peoples have always used KT to pass on knowledge about health, wellbeing, culture, environmental sustainability, and all aspects of life through stories, music, dance and other practices[11]. However, the application of KT in Indigenous research in Australia is still an emergent field, with limited evidence available on how to appropriately conduct KT with Aboriginal and Torres Strait Islander people in the research context in Australia. Indigenist KT models and practices can be used as one tool to address the history of research that has been detrimental to the lives of Aboriginal and Torres Strait Islander peoples.

Rationale for the scoping review

Scoping reviews explore a defined body of literature, identify the type(s) of evidence available, and summarise the evidence. This scoping review aims to map, report and discuss the available evidence on KT in Aboriginal and Torres Strait Islander research in Australia, to assist in understanding how KT can be conducted in the context of a large-scale national survey of health and wellbeing across Aboriginal and Torres Strait Islander communities, policy and research landscapes.

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4 A scoping review was selected for this research because we are interested in mapping, reporting, and
5 discussing KT concepts to provide an overview of the available evidence. Scoping reviews allow for a
6 broader research question than other types of reviews, which is useful for emergent fields such as KT
7 with Indigenous populations[13]. Our research seeks to give an overview of the evidence and the
8 diversity of knowledge available in this area.
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11 This scoping review will be conducted from May 2022. Scoping review findings will demonstrate how
12 researchers in Aboriginal and Torres Strait Islander contexts can appropriately translate research
13 findings to a range of end-users. A scoping review is necessary to ensure that KT definition, method
14 and practices are, from the outset, created from Aboriginal and Torres Strait Islander needs and interests,
15 with culture at the centre. Adapting Western methods, practices, or tools does not produce the same
16 quality of outcomes as designing methods, practices, and tools within an Aboriginal and Torres Strait
17 Islander worldview from the outset[14]. Further, commonly cited definitions, methods and practices of
18 KT are inadequate for Aboriginal and Torres Strait Islander research contexts as they were not
19 developed for these contexts; a scoping review is necessary as the first step to addressing these issues.
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22 Scoping review findings will be relevant to all researchers working in Aboriginal and Torres Strait
23 Islander research contexts. The scoping review findings will also be used to inform KT in Mayi
24 Kuwayu: the National Study of Aboriginal and Torres Strait Islander Wellbeing (the Mayi Kuwayu
25 Study). The Mayi Kuwayu Study is a large-scale, national longitudinal cohort study of Aboriginal and
26 Torres Strait Islander peoples aged 16 years and older[15]. It aims to understand the links between
27 culture and health and wellbeing outcomes for Aboriginal and Torres Strait Islander peoples. The Study
28 was developed for and by Aboriginal and Torres Strait Islander peoples, with their active involvement
29 and input into the Study at every stage.
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32 To date, the key focus of the Mayi Kuwayu Study has been in the survey development, survey rollout,
33 and validation of measures[15]. KT has been implemented in the Mayi Kuwayu Study where possible,
34 including community workshops, participant fact sheets, presentations at conferences and policy
35 settings, and a strong social media presence. These practices have ensured that end-users have been
36 involved in the design, development and distribution of the Study, and have access to preliminary Study
37 results.
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40 As of December 2021, over 10,000 Aboriginal and Torres Strait Islander people had participated in the
41 Mayi Kuwayu Study. Now that the first wave of data has been collected, the focus of the Mayi Kuwayu
42 Study has recently turned to translating data and results to key end-users: Aboriginal and Torres Strait
43 Islander communities, policy-makers and other researchers. Developing KT practices for the Mayi
44 Kuwayu Study has only been possible since the influx of participant data. The impetus for this scoping
45 review to inform the KT practices of the Mayi Kuwayu Study, however results will also be relevant to
46 researchers working in Aboriginal and Torres Strait Islander research contexts more broadly.
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49 There are few other scoping or literature reviews on KT for Indigenous peoples internationally. Morton
50 Ninomiya[16] conducted an international review of KT in Indigenous health research to inform their
51 work in Canada, and Shibasaki[11] conducted an international scoping review of KT models and
52 frameworks which could be applied in the Torres Strait. The present review will be the first to explore
53 KT across Aboriginal and Torres Strait Islander Australia.
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55 *Methodology*

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57 This scoping review is conducted under an Indigenous research methodology. As a protocol of an
58 Indigenous research methodology, all stages of this research are guided by an Aboriginal and Torres
59 Strait Islander governance committee. The *Thiitu Tharrmay Aboriginal and Torres Strait Islander
60 Governance Committee* provides independent advice on research and evaluation activities conducted
by the Aboriginal and Torres Strait Islander wellbeing team at the Australian National University. Thiitu
Tharrmay consists of at least 10 Aboriginal and/or Torres Strait Islander members who are involved in
the analyses, interpretations and outputs of work conducted by the Aboriginal and Torres Strait Islander

wellbeing team, including this scoping review. While it is not possible to represent the full diversity of the Aboriginal and Torres Strait Islander population, members of Thiitu Tharrmay collectively represent a diversity of Aboriginal and Torres Strait Islander lived experiences, come from different communities, cultures and Countries, and different research backgrounds and expertise. Governance by Thiitu Tharrmay ensures that Aboriginal and Torres Strait Islander epistemologies (ways of knowing), axiologies (ways of doing) and ontologies (ways of being) are centred throughout the review[17-18].

As another protocol of an Indigenous research methodology, we will also conduct the scoping review and its analyses under Australian Indigenous Data Sovereignty principles, as outlined by the *Maiam nayri Wingara* Indigenous Data Sovereignty Collective. Under these principles, we will have Aboriginal and Torres Strait Islander peoples control the data ecosystem; contextualise the scoping review findings; present data in ways that are relevant and empower self-determination; and ensure results are protective, strengths-based and accountable to Aboriginal and Torres Strait Islander peoples and communities. For details on how Indigenous Data Sovereignty Principles will be met throughout the scoping review, see Supplementary File 1.

Methods and analysis

Patient and Public Involvement

No patients involved.

Objective

Our research question is: *how do you conduct KT in Aboriginal and Torres Strait Islander research fields?* Our objective is to map, report and discuss the literature on KT in Aboriginal and Torres Strait Islander Australia.

Inclusion criteria

To answer this research question, we will conduct a scoping review following methods outlined by the Joanna Briggs Institute (JBI)[13]. The JBI method provides the principles of how to conduct a scoping review, including developing the inclusion criteria, conducting the search strategy, and charting the results. This method was selected due to JBI's extensive work on evidence-based tools and resources, which are updated in line with methodological developments, making these methods the leading standards of practice[19]. This method has also been implemented in other scoping reviews in Aboriginal and Torres Strait Islander research (for example, see [20]).

Scoping reviews intend to have a broad scope and less restrictive inclusion criteria than other types of reviews[13]. To develop our inclusion criteria, the authors developed a list of common terms for "knowledge translation", and worked with *Thiitu Tharrmay* to identify any additional terms used in academic and research settings to refer to "knowledge translation". Members of *Thiitu Tharrmay* agreed that "knowledge translation" is an academic and research term that may not resonate with Aboriginal and Torres Strait Islander community members, but is appropriate for conducting the scoping review. *Thiitu Tharrmay* did not identify any additional search terms for the scoping review that were not already identified by the authors.

We use the truncated "Aborig*" to refer to common variations of "Aboriginal". We specify "Torres Strait" to include only peoples from the Torres Strait and exclude other Islander groups. We also include "Indigenous", "First Nations" and "First Peoples" as these terms are commonly used to refer to Aboriginal and Torres Strait Islander peoples in Australia. Studies will be included if they purposefully sample Aboriginal and/or Torres Strait Islander participants. Studies that include Indigenous participants internationally will only be included if they also include Aboriginal and/or Torres Strait Islander participants. Studies will be included if they describe research with either ongoing or completed KT processes, and protocol papers will be excluded. We additionally restrict to "Australia" and English language only. We do not restrict to any research area to keep the scope as broad as possible. The inclusion criteria for this scoping review are:

1. Population: (“*Aborig**” or “*Torres Strait**” or “*Indigenous*” or “*First Nation**” or “*First People**”)
2. Concept: (“*knowledge translation*” or “*knowledge exchange*” or “*knowledge transfer*” or “*knowledge mobilisation*”)
3. Context: (*Australia*)

Search strategy

Step 1 is an initial search in three online databases. We will use ANU SuperSearch, PubMed database, and SAGE journals: Science Communication. The ANU SuperSearch search engine is an all-in-one academic search engine that includes 568 electronic resources. The full list of e-resources and databases is available at: <<http://library-admin.anu.edu.au/e-resources/index.html?showAll=GO>> We will use the PubMed database because of its extensive citations for health, biomedical, and life sciences literature. Finally, we will search in SAGE journals: Science Communication due to its focus on diffusion, dissemination and communication of science. At Step 2, search results will be imported into EndNote, with duplicates removed. Step 3 is a two-stage screening process by two separate reviewers, using the inclusion criteria described above. Titles and abstracts will be scanned for eligibility for full text review. To be eligible for full-text review, resources must be about KT, and must include Aboriginal and Torres Strait Islander people in the study population. Any discrepancies will be discussed between the two reviewers to come to a final decision. If a decision cannot be made, advice will be sought from an Aboriginal and/or Torres Strait Islander researcher. At Step 4, all included resources will then undergo a full-text review. Finally, Step 5 involves reviewing grey and hard to find literature, by searching the reference lists of included material, Indigenous research databases, and reviewing books and chapters.

Source of evidence selection

The source selection process is detailed in Figure 1.

Presentation of evidence

We use the JBI method in conjunction with an Indigenous research methodology to firstly map and summarise the overall evidence, and to secondly present evidence that are aligned with Aboriginal and Torres Strait Islander worldviews. All scoping review analysis and presentation of evidence will be conducted in collaboration with *Thiitu Tharrmay*.

We first follow the JBI guidance on presenting search results (for example, charting the descriptive criteria of each included source). JBI note that presenting the evidence can be an “iterative process” for additional data that can be usefully charted, and that the presentation of the results is “expected to be further refined toward the end of the review”[19]. After charting JBI’s recommended criteria, in line *Thiitu Tharrmay*’s advice, we therefore also report on evidence relevant under our Indigenous research methodology. This will include whether the study worked with a community reference group during the research, and whether the study centred what was important to the community in the translation activities.

Presentation of scoping review results will also include calculating the distribution of articles based on extracted topics. This will include the distribution of articles published per year against the type of KT method (Figure 2). It will also include evidence on the research area (e.g., health, education, social science), the KT definition and method for each study, and Indigeneity of participants (i.e., Aboriginal, Torres Strait Islander, or both Aboriginal and Torres Strait Islander). Where possible we will also report whether the article was authored by Aboriginal or Torres Strait Islander individuals and we will privilege the articles by Aboriginal and Torres Strait Islander peoples in our analyses, through more detailed reporting and examination of KT theory and methods used, as part of the Indigenous research methodology (Table 1). Other additional evidence to extract, collate and present upon according to our Indigenous research methodology is an ongoing and iterative process with *Thiitu Tharrmay*.

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3 Transparency and readability of the scoping review results are of utmost importance for the benefit of
4 other Indigenous health researchers. As such, reporting of the scoping review results will follow the
5 PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for
6 Scoping Reviews) guidelines. The PRISMA-ScR contains a 20-item checklist for reporting results of a
7 scoping review, developed by experts following best-practice guidance on increasing quality and
8 transparency of research. The PRISMA-ScR guidelines helps scoping review readers “develop a greater
9 understanding of relevant terminology, core concepts, and key items”[21].
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For peer review only

Table 1: Overview of scoping review results

Author	Title	Research area	KT definition	KT method	Indigeneity of participants	Indigeneity of author/s
	KT as the primary focus of the research					
	KT as a component of the research					

* Indigeneity of authors is unknown

For peer review only

Ethics and dissemination

The Mayi Kuwayu Study has ethics approvals from the Australian Institute of Aboriginal and Torres Strait Islander Studies, the ANU Human Research Ethics Committee, and from an additional 12 State and Territory committees, including relevant Aboriginal and Torres Strait Islander organisations:

1. Aboriginal Health and Medical Research Council (AH&MRC) NSW: 1268/17
2. Aboriginal Health Research Ethics Committee SA: AHREC 04-17-723
3. ACT Health 2018/ETH/00205
4. Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS): E030/22052015
5. Australian National University Human Research Ethics Committee: 2016/787
6. Central Australian Human Research Ethics Committee (CAHREC) CA-17-2810
7. Metro South, Queensland: HREC/2019/QMS/56115
8. NT Department of Health & Menzies: 2017-2804
9. Nunkuwarrin Yunti
10. St Vincent's Hospital Melbourne HREC: 132/17
11. University of Tasmania (UTAS): H0016473
12. Western Australian Aboriginal Health Ethics Committee (WAAHEC): 787

This protocol is registered with The Open Science Framework and is available at osf.io/asmp6

The results of this scoping review will be discussed with *Thiitu Tharrmay* and disseminated through a peer-review publication and Aboriginal and Torres Strait Islander community, info sheets, workshops and presentations.

Contributorship statement

MB and RL conceptualised this work. MB drafted the manuscript. RL, SB, FWL conducted the critical review of the manuscript. All authors have read and agreed to the published version of the manuscript.

Competing interests

None declared.

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References

1. Smith LT. Decolonizing Methodologies: Research and Indigenous Peoples. 2 ed. United Kingdom: Zed Books 2012.
2. Walker M, Fredericks B, Mills K, et al. "Yarning" as a method for community-based health research with Indigenous women: the Indigenous Women's Wellness Research Program. *Health Care Women Int* 2014;35:1216-26.
3. Wilson S. Research Is Ceremony: Indigenous Research Methods. Black Point: Fernwood Pub 2008.
4. Dudgeon P, Bray A, Darlaston-Jones D, et al. Aboriginal Participatory Action Research: An Indigenous Research Methodology Strengthening Decolonisation and Social and Emotional Wellbeing. Melbourne: Discussion Paper, The Lowitja Institute; 2020.
5. Dadich A, Moore L, Eapen V. What does it mean to conduct participatory research with Indigenous peoples? A lexical review. *BMC Public Health*. 2019;19:1388.
6. Straus SE, Tetroe J, Graham I. Defining knowledge translation. *CMAJ* 2009;181:165-8.
7. Tait H, Williamson A. A literature review of knowledge translation and partnership research training programs for health researchers. *Health Res Policy and Syst*. 2019;17:98.
8. Canadian Institutes of Health Research. Knowledge translation: definition. Government of Canada. 2016.
9. Leadbeater BJ, Banister EM, Marshall EA. How-What-We-Know-Becomes-More-Widely-Known is Context Dependant and Culturally Sensitive. In: Leadbeater BJ, Banister EM, Marshall EA, eds. Knowledge Translation in Context: Indigenous, Policy, and Community Settings. University of Toronto Press 2011:1-12
10. Jull J, Giles A, Graham ID. Community-based participatory research and integrated knowledge translation: advancing the co-creation of knowledge. *Implement Sci*. 2017;12:150.
11. Shibasaki S, Sibthorpe B, Watkin Lui F, et al. Flipping the researcher knowledge translation perspective on knowledge use: a scoping study. *AlterNative*. 2019;15:271-80.
12. Gammage B. The Biggest Estate on Earth. Allen & Unwin Australia. 2012.
13. Peters M, Godfrey C, McInerney P, et al. Chapter 11: Scoping Reviews. In: Aromataris E, Munn Z, eds. JBI Manual for Evidence Synthesis 2020.
14. AIHW. Measuring the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples. Canberra: Australian Institute of Health and Wellbeing. 2009.
15. Jones R, Thurber KA, Chapman J, et al. Study protocol: Our Cultures Count, the Mayi Kuwayu Study, a national longitudinal study of Aboriginal and Torres Strait Islander wellbeing. *BMJ Open*. 2018;8:1-7.
16. Morton Ninomiya ME, Atkinson D, Brascoupé S, et al. Effective knowledge translation approaches and practices in Indigenous health research: a systematic review protocol. *Syst rev*. 2017;6:1-7.
17. Moreton-Robinson A, & Walter, M. Indigenous Methodologies in Social Research. In: Walter M, eds. Social Research Methods 2009:1-18.
18. Rigney L-I. Internationalization of an Indigenous Anticolonial Cultural Critique of Research Methodologies: A Guide to Indigenist Research Methodology and Its Principles. *Wicazo Sa Review*. 1999;14:109-21.
19. Aromataris EM, Z. JBI Manual for Evidence Synthesis. 2020;JBI.
20. Usher K, Jackson D, Walker R, et al. Indigenous Resilience in Australia: A Scoping Review Using a Reflective Decolonizing Collective Dialogue. *Front Public Health*. 2021;9.
21. Tricco AC, Lillie E, Zarin W, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med*. 2018;169:467-73.

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3 **Figure legends**
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5 Figure 1: Source selection process

6 Figure 2: Number of KT articles published each year by inclusion/exclusion of KT method
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- Articles identified in the initial search (n=)

- Duplicates removed (n=)

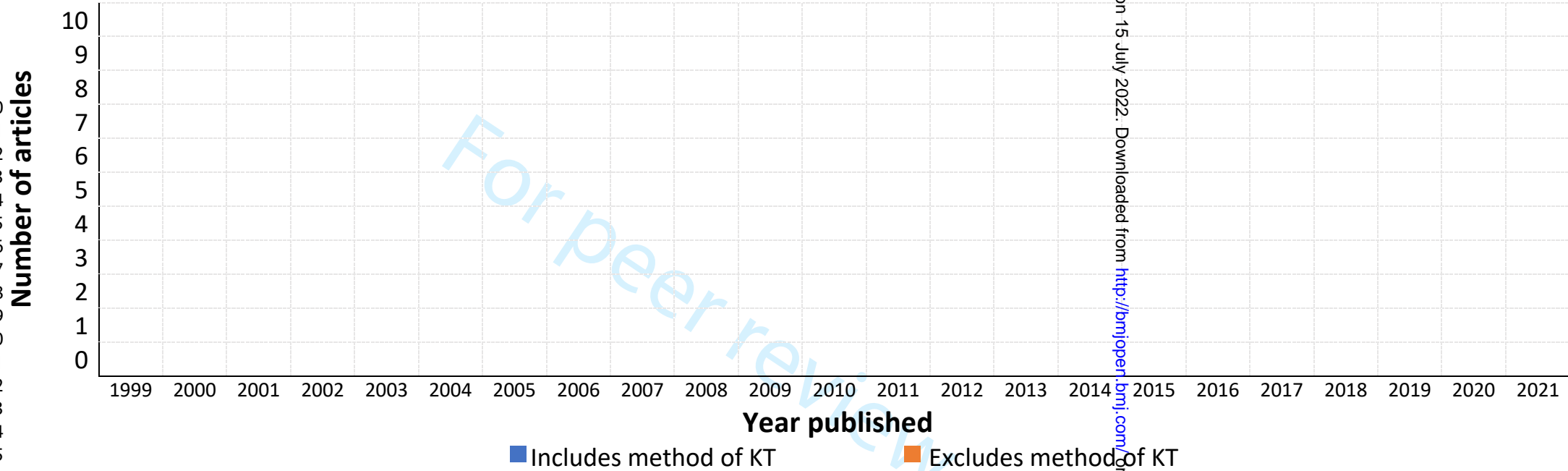
- Articles retained after title and abstract screening (n=)

- Articles retained after full text screening (n=)

- Articles included from reference list and grey literature screening (n=)

- Final articles included (N=)

Number of KT articles published per year



Supplementary File 1: Details on the Maïam nayri Wingara Indigenous Data Sovereignty Principles will be enacted within the scoping review¹

Principle 1: Demonstrate how your proposed project ensures Aboriginal and Torres Strait Islander people will exercise control (all or individual elements) of the data ecosystem.

Control: An Aboriginal and Torres Strait Islander research team control all aspects of this research. The scoping review is designed and led by an Aboriginal academic (MB Wiradjuri) and all other members of the research are Aboriginal or Torres Strait Islander (SB Gidja and Gamilaroi; FWL Torres Strait Islander with giz from Erub, Mabuiag and Badu; RL Ngiyampaa/Wongaibon).

Data stewardship: All stages of the data ecosystem will be controlled by the research team under the guidance of an Aboriginal and Torres Strait Islander governance committee *Thiitu Tharrmay* who will:

1. Be a source of expertise and advice on Aboriginal and Torres Strait Islander cultures;
2. Provide advice on the appropriate conduct of research including ensuring that the research, dissemination and policy agenda reflects Aboriginal and Torres Strait Islander community priorities and values;
3. Assist in developing the scoping review search terms and criteria;
4. Facilitate the dissemination and translation of research findings with Aboriginal and Torres Strait Islander communities and organisations;
5. Review and assist in interpreting scoping review results before publication;
6. Contribute to publications where appropriate;
7. Provide links to other relevant research, policy and practice initiatives that may benefit from scoping review results.

Data analysis: Steps 1 and 2 of the search strategy will be conducted by MB. Step 3 will be conducted by MB and RL. Steps 4 and 5 will be conducted by MB, SB, FWL and RL. Interpretation and analysis of results from the final included articles will be discussed with the Aboriginal research team and *Thiitu Tharrmay*.

Data dissemination: Aboriginal and Torres Strait Islander people will receive information from the scoping review through community focus groups, seminars and workshops; community reports; and social media posts on the results of the scoping review. Scoping review information will also be available to Aboriginal and Torres Strait Islander peoples, and non-Indigenous people, in peer reviewed journals, conferences, and policy briefs where relevant.

Principle 2: Demonstrate how your proposed project will include contextual aspects and be disaggregated (available and accessible at individual, community and Indigenous national levels).

Contextual: Any data or output will include contextual information, for example the history of research on Aboriginal and Torres Strait Islander peoples. This context will help in truth telling and explaining the story behind the data. When working with Aboriginal and Torres Strait Islander communities, they will have opportunities throughout to comment, influence and work with the data outputs, including the way the data is presented back to community members. This gives scope for community-specific contextual information.

Accessible and available: Outputs will be made available to Aboriginal and Torres Strait Islander communities through KT forums. These may involve focus groups, interviews, workshops and presentations to give the requested data back to communities in ways relevant and meaningful to them. Pending COVID travel restrictions, these KT forums will be held on site in communities to allow for as many participants attending as possible. Resources on the data and outputs will also be provided to communities in plain-language and accessible formats for wider community distribution.

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3 **Principle 3:** Demonstrate how your proposed project will empower sustainable Indigenous self-
4 determination and effective self-governance.

5 **Relevant:** The Mayi Kuwayu Study is the largest national study of Aboriginal and Torres Strait Islander
6 health and wellbeing to date. Its development came from Aboriginal and Torres Strait Islander peoples'
7 and communities' desires to have their cultures, health and wellbeing better understood – on our own
8 terms. The present scoping review is about giving this data back to stakeholders in ways relevant to
9 them. This ensures that all data from the Mayi Kuwayu Study that is translated to communities is
10 relevant to their specific contexts and needs, and reduces the burden on Aboriginal and Torres Strait
11 Islander communities. Throughout the Mayi Kuwayu Study, there has been a strong desire from partner
12 communities to have their own community-specific data given back to them in ways that are accessible
13 to their needs. This call directly relates to the scoping review: it is first necessary to understand what
14 works and what doesn't work in Aboriginal and Torres Strait Islander research contexts, in order to be
15 able to develop an effective and evidence-based knowledge translation plan
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18 **Self-determination and self-governance:** This project will contribute to Indigenous self-determination
19 and governance through Aboriginal and Torres Strait Islander control of the project as all Research
20 Team members are Aboriginal or Torres Strait Islander, and the project's governance group *Thiitu*
21 *Tharrmay* are all Aboriginal and/or Torres Strait Islander. While it is not possible to represent all the
22 diversity across the Aboriginal and Torres Strait Islander population, within these two groups are a
23 diversity of Aboriginal and Torres Strait Islander peoples, from different mobs and Countries, and with
24 different research backgrounds and expertise. This helps maintain Aboriginal and Torres Strait Islander
25 control over decisions throughout the life of the project while representing some of the diversity across
26 different mobs.
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28 **Principle 4:** Demonstrate how your proposed project has data structures that are accountable to
29 Indigenous peoples.

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31 The Research Team will be guided by data storage procedures at the Australian National University
32 (ANU). Data will be stored on the ANU secure server, only accessible by approved members of the
33 research team. Data stored on the ANU secure server is backed up daily at midnight. The data is stored
34 at three geographically separate off-site Data Centres: Crisp, Huxley, and NCI. At the completion of
35 the research project, the data will be stored on the secure, password-protected shared drive for 7 years
36 after data collection, or 5 years after any publication, whichever is longer. Draft project output will be
37 provided to Aboriginal and Torres Strait Islander stakeholders including *Thiitu Tharrmay* for input and
38 feedback, prior to their finalisation and dissemination.
39

40 **Principle 5:** Demonstrate how your proposed project results are protective and respects Indigenous
41 individual and collective interests.

42 The scoping review is being conducted under a strengths-based methodology: we are looking for KT
43 practices that work for Aboriginal and Torres Strait Islander communities to be able to develop a KT
44 framework that is, from the outset, based on Aboriginal and Torres Strait Islander values, worldviews
45 and ways of knowing, being and doing. The KT framework will enable Aboriginal and Torres Strait
46 Islander communities to use Mayi Kuwayu Study data for their own individual and collective interests.
47

48 Our findings will be protected after dissemination through clear and consistent messaging in peer
49 reviewed publications, reports, social media and public presentations. Any misinterpretation of findings
50 will be corrected online and in person as soon as possible, and any trolling will be removed from online
51 spaces.
52

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54 ¹ Available at: <https://mkstudy.com.au/dataapplicationprocess/> and
55 <https://www.maiamnayriwngara.org/key-principles>
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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	4
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	5
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	N/A The manuscript is the protocol
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	6
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	6
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	6
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	8
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	8
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe	N/A



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
		the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	8
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	7
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	8
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	N/A
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	8
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	8
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	N/A There are no results as this is a protocol
Limitations	20	Discuss the limitations of the scoping review process.	9
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	9
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	12

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: 10.7326/M18-0850.



BMJ Open

Knowledge Translation in Aboriginal and Torres Strait Islander Research Contexts in Australia: Scoping Review Protocol

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Manuscripts

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3 1 Knowledge Translation in Aboriginal and Torres Strait Islander Research Contexts in Australia:
4 2 Scoping Review Protocol
5 3

6 4 Authors: Makayla-May Brinckley^{1A}, Sarah Bourke^{1B}, Felecia Watkin Lui^{2C}, Ray Lovett^{1D}
7 5

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17 15 ^D Ngiyampaa (Wongaibon), Australia
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25 23
26 24

27 25 *Word count:* 2,768
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30 24 *Keywords:* knowledge translation, knowledge exchange, knowledge transfer, knowledge mobilisation,
31 25 Indigenous, Aboriginal, Torres Strait Islander
32 26

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2
3 **27 Abstract**
4 28

5 29 *Introduction*
6

7 30 Knowledge Translation (KT) involves bridging the gaps between research knowledge and research
8 31 application or practice, by sharing this knowledge with end-users. KT is increasingly being used in
9 32 research with Indigenous peoples globally to address the top-down and inappropriate research
10 33 approaches commonly used in Indigenous research. Employing KT in Indigenous research in Australia
11 34 is an emergent field, despite Aboriginal and Torres Strait Islander peoples having conducted KT for
12 35 generations.
13 36

14 37 There is limited evidence which demonstrates how KT is applied in the Aboriginal/Torres Strait Islander
15 38 context. Results will benefit researchers by demonstrating ways of appropriately translating research
16 39 findings to end-users, including Aboriginal and Torres Strait Islander communities, researchers and
17 40 policy makers. The scoping review will also inform the KT definition, method and practices used in a
18 41 large-scale, longitudinal cohort study of Aboriginal and Torres Strait Islander adults: the Mayi Kuwayu
19 42 Study.
20 43

21 44 *Methods and analysis*
22

23 45 Under guidance of an Aboriginal and Torres Strait Islander governance committee, we will conduct a
24 46 scoping review on KT in Aboriginal/Torres Strait Islander research. We will follow the scoping review
25 47 method outlined by the Joanna Briggs Institute. We will search the ANU SuperSearch, and grey and
26 48 hard to find literature in June 2022. Abstracts and full-text articles will be screened by two independent
27 49 reviewers. We will include studies that related to KT in Aboriginal/Torres Strait Islander research,
28 50 regardless of the research topic. Results will be used to inform the KT definition, method and practices
29 51 that can be used in Aboriginal/Torres Strait Islander research contexts in Australia.
30 52

31 53 *Ethics and dissemination*
32

33 54 The Mayi Kuwayu Study has ethics approvals from the Australian Institute of Aboriginal and Torres
34 55 Strait Islander Studies, 12 Aboriginal/Torres Strait Islander organisations, and the Australian National
35 56 University Human Research Ethics Committee. Results will be disseminated through peer-review
36 57 publication and community workshops. Protocol registration is available at osf.io/asmp6
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3 60 **Article Summary**
4 61

5 62 *Strengths and limitations of this study*
6 63

- 7 63 • Recent work reports on and evaluates the promising and wise KT practices in Indigenous health
8 64 contexts internationally. The present study will be the first scoping review to map, report and
9 65 discuss the literature on KT specifically for Aboriginal and Torres Strait Islander peoples in
10 66 Australia.
11 67 • A potential limitation of this study is that the search terms are “knowledge translation” or
12 68 “knowledge exchange” or “knowledge transfer” or “knowledge mobilisation” as these are
13 69 commonly used phrases in the literature. There are possibly other phrases that have been used
14 70 in the literature that will not be captured in this search.
15 71 • This scoping review is limited to KT in Aboriginal and Torres Strait Islander Australia, which
16 72 is necessary as the scoping review must be specific for the cultural context of an Australian
17 73 national Aboriginal and Torres Strait Islander health study.
18 73 • This scoping review will not review the quality of the studies; it will provide new evidence on
19 74 how KT is described and what types of methods are used in employing KT in Aboriginal and
20 75 Torres Strait Islander Australia.
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77 Introduction

78 Background

79 Indigenous peoples in colonised countries have unique cultures and socio-environmental contexts, but
80 share a common history of being inappropriately researched, with little to no cultural acknowledgement
81 or respect, and limited corresponding improvements in health and wellbeing outcomes as a result of the
82 research[1, 2]. Such inappropriate research “has neither been asked for, nor has it any relevance for the
83 communities being studied”[3]. Historically, research has been used as a way for colonisers to regulate
84 and control Indigenous peoples, and for researchers to advance their own agendas and careers, leading
85 to the present-day cynicism and distrust of research in many Indigenous communities[1]. The
86 Indigenous research field, however, is shifting, with Indigenous bodies internationally recommending
87 participatory research as a way to move from top-down research to instead involve Indigenous peoples
88 throughout the research process[4].

89
90
91 At the core of participatory research is an equal research partnership where researchers and Indigenous
92 peoples make research decisions together[5]. These partnerships aim to shift the balance of research to
93 have “equal-opportunity” for all involved in sharing and generating knowledge[5]. Participatory
94 research is upheld as standard practice for Indigenous research as it aims to give Indigenous
95 communities autonomy and agency throughout research that involves them[4]. However, while its
96 importance is internationally understood, the implementation of participatory research varies, and
97 specific processes of participatory research with Indigenous peoples are still unclear[5].

98
99 One process of participatory research is knowledge translation (KT). Our working definition of KT is
100 that it is about bridging the gaps between research knowledge or findings, and research application or
101 practice[6, 7]. KT in research is the practice of sharing research knowledge with knowledge-users, who
102 are the people, communities or organisations who use knowledge gathered by research to improve
103 health systems, outcomes, services and products[8]. Knowledge-users may include the Indigenous
104 communities involved in the research, academics or researchers, and policy makers. KT in research is
105 therefore the dynamic and iterative process of how what researchers know becomes more widely known
106 across populations[9].

107
108 KT and participatory research both aim to co-create knowledge through committed partnerships
109 between knowledge-users and researchers[10]. While participatory research involves partnerships with
110 knowledge users throughout the whole research journey, KT is just one aspect of this participatory
111 research journey. Effective KT is embedded in the whole research journey and occurs when research
112 knowledge is translated to people who were involved in producing the knowledge.

113
114 While KT in research is a growing field, it has been practiced in Indigenous communities for
115 generations[11]. Aboriginal and Torres Strait Islander peoples are the First People of Australia, having
116 lived on and from the land for tens of thousands of years. Aboriginal and Torres Strait Islander people
117 have survived ongoing colonisation since 1788, keeping cultures, languages and customs alive and
118 strong. Aboriginal and Torres Strait Islander peoples have always used KT to pass on knowledge about
119 health, wellbeing, culture, environmental sustainability, and all aspects of life through stories, music,
120 dance and other practices[11]. However, the application of KT in Indigenous research in Australia is
121 still an emergent field, with limited evidence available on how to appropriately conduct KT with
122 Aboriginal and Torres Strait Islander people in the research context in Australia. Indigenist KT models
123 and practices can be used as one tool to address the history of research that has been detrimental to the
124 lives of Aboriginal and Torres Strait Islander peoples.

125 Rationale for the scoping review

126 Scoping reviews explore a defined body of literature, identify the type(s) of evidence available, and
127 summarise the evidence. This scoping review aims to map, report and discuss the available evidence on
128 KT in Aboriginal and Torres Strait Islander research in Australia, to assist in understanding how KT
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3 130 can be conducted in the context of a large-scale national survey of health and wellbeing across
4 131 Aboriginal and Torres Strait Islander communities, policy and research landscapes.

5 132
6 133 A scoping review was selected for this research because we are interested in mapping, reporting, and
7 134 discussing KT concepts to provide an overview of the available evidence. Scoping reviews allow for a
8 135 broader research question than other types of reviews, which is useful for emergent fields such as KT
9 136 with Indigenous populations[12]. Our research seeks to give an overview of the evidence and the
10 137 diversity of knowledge available in this area.

11 138
12 139 This scoping review will be conducted from June 2022. Scoping review findings will demonstrate how
13 140 researchers in Aboriginal and Torres Strait Islander contexts can appropriately translate research
14 141 findings to a range of end-users. A scoping review is necessary to ensure that KT definition, method
15 142 and practices are, from the outset, created from Aboriginal and Torres Strait Islander needs and interests,
16 143 with culture at the centre. Adapting Western methods, practices, or tools does not produce the same
17 144 quality of outcomes as designing methods, practices, and tools within an Aboriginal and Torres Strait
18 145 Islander worldview from the outset[13]. Further, commonly cited definitions, methods and practices of
19 146 KT are inadequate for Aboriginal and Torres Strait Islander research contexts as they were not
20 147 developed for these contexts; a scoping review is necessary as the first step to addressing these issues.

21 148
22 149 Scoping review findings will be relevant to all researchers working in Aboriginal and Torres Strait
23 150 Islander research contexts. The scoping review findings will also be used to inform KT in Mayi
24 151 Kuwayu: the National Study of Aboriginal and Torres Strait Islander Wellbeing (the Mayi Kuwayu
25 152 Study). The Mayi Kuwayu Study is a large-scale, national longitudinal cohort study of Aboriginal and
26 153 Torres Strait Islander peoples aged 16 years and older[14]. It aims to understand the links between
27 154 culture and health and wellbeing outcomes for Aboriginal and Torres Strait Islander peoples. The Study
28 155 was developed for and by Aboriginal and Torres Strait Islander peoples, with their active involvement
29 156 and input into the Study at every stage.

30 157
31 158 To date, the key focus of the Mayi Kuwayu Study has been in the survey development, survey rollout,
32 159 and validation of measures[14]. KT has been implemented in the Mayi Kuwayu Study where possible,
33 160 including community workshops, participant fact sheets, presentations at conferences and policy
34 161 settings, and a strong social media presence. These practices have ensured that end-users have been
35 162 involved in the design, development and distribution of the Study, and have access to preliminary Study
36 163 results.

37 164
38 165 As of December 2021, over 10,000 Aboriginal and Torres Strait Islander people had participated in the
39 166 Mayi Kuwayu Study. Now that the first wave of data has been collected, the focus of the Mayi Kuwayu
40 167 Study has recently turned to translating data and results to key end-users: Aboriginal and Torres Strait
41 168 Islander communities, policy-makers and other researchers. Developing KT practices for the Mayi
42 169 Kuwayu Study has only been possible since the influx of participant data. The impetus for this scoping
43 170 review to inform the KT practices of the Mayi Kuwayu Study, however results will also be relevant to
44 171 researchers working in Aboriginal and Torres Strait Islander research contexts more broadly.

45 172
46 173 There are few other scoping or literature reviews on KT for Indigenous peoples internationally. Morton
47 174 Ninomiya et al.[15] conducted an international review of KT in Indigenous health research to inform
48 175 their work in Canada, and Shibasaki et al.[11] conducted an international scoping review of KT models
49 176 and frameworks which could be applied in the Torres Strait. While work is progressing for KT in
50 177 Indigenous research contexts, to date, a review of KT for research with Aboriginal and Torres Strait
51 178 Islander peoples specifically has not been conducted. The present review will be the first to explore KT
52 179 across Aboriginal and Torres Strait Islander Australia, which aims to fill the gap in understanding the
53 180 definitions, methods, and processes implemented in KT with Aboriginal and Torres Strait Islander
54 181 peoples in Australia.

55 182
56 183 *Methodology*

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2
3 184 This scoping review is conducted under an Indigenous research methodology. As a protocol of an
4 185 Indigenous research methodology, all stages of this research are guided by an Aboriginal and Torres
5 186 Strait Islander governance committee. The *Thiitu Tharrmay Aboriginal and Torres Strait Islander*
6 187 *Governance Committee* provides independent advice on research and evaluation activities conducted
7 188 by the Aboriginal and Torres Strait Islander wellbeing team at the Australian National University. Thiitu
8 189 Tharrmay consists of at least 10 Aboriginal and/or Torres Strait Islander members who are involved in
9 190 the analyses, interpretations and outputs of work conducted by the Aboriginal and Torres Strait Islander
10 191 wellbeing team, including this scoping review. While it is not possible to represent the full diversity of
11 192 the Aboriginal and Torres Strait Islander population, members of Thiitu Tharrmay collectively represent
12 193 a diversity of Aboriginal and Torres Strait Islander lived experiences, come from different communities,
13 194 cultures and Countries, and different research backgrounds and expertise. Governance by Thiitu
14 195 Tharrmay ensures that Aboriginal and Torres Strait Islander epistemologies (ways of knowing),
15 196 axiologies (ways of doing) and ontologies (ways of being) are centred throughout the review[16, 17].
16 197

17 198 As another protocol of an Indigenous research methodology, we will also conduct the scoping review
18 199 and its analyses under Australian Indigenous Data Sovereignty principles, as outlined by the *Maiam*
19 200 *nayri Wingara* Indigenous Data Sovereignty Collective[18]. Under these principles, we will have
20 201 Aboriginal and Torres Strait Islander peoples control the data ecosystem; contextualise the scoping
21 202 review findings; present data in ways that are relevant and empower self-determination; and ensure
22 203 results are protective, strengths-based and accountable to Aboriginal and Torres Strait Islander peoples
23 204 and communities. For details on how Indigenous Data Sovereignty Principles will be met throughout
24 205 the scoping review, see Supplementary File 1.
25 206

26 207 **Methods and analysis**

27 208 *Patient and Public Involvement*

28 209 No patients involved.
29 210

30 211 *Objective*

31 212 Our research question is: *what are the KT practices used in Aboriginal and Torres Strait Islander*
32 213 *research contexts?* Our objective is to map, report and discuss the literature on KT in Aboriginal and
33 214 Torres Strait Islander Australia.
34 215
35 216

36 217 *Inclusion criteria*

37 218 To answer this research question, we will conduct a scoping review following methods outlined by the
38 219 Joanna Briggs Institute (JBI)[12]. The JBI method provides the principles of how to conduct a scoping
39 220 review, including developing the inclusion criteria, conducting the search strategy, and charting the
40 221 results. This method was selected due to JBI's extensive work on evidence-based tools and resources,
41 222 which are updated in line with methodological developments, making these methods the leading
42 223 standards of practice[19]. This method has also been implemented in other scoping reviews in
43 224 Aboriginal and Torres Strait Islander research (for example, see [20]).
44 225

45 226 Scoping reviews intend to have a broad scope and less restrictive inclusion criteria than other types of
46 227 reviews[12]. To develop our inclusion criteria, the authors developed a list of common terms for
47 228 "knowledge translation", and worked with *Thiitu Tharrmay* to identify any additional terms used in
48 229 academic and research settings to refer to "knowledge translation". Members of *Thiitu Tharrmay* agreed
49 230 that "knowledge translation" is an academic and research term that may not resonate with Aboriginal
50 231 and Torres Strait Islander community members, but is appropriate for conducting the scoping review.
51 232 *Thiitu Tharrmay* did not identify any additional search terms for the scoping review that were not
52 233 already identified by the authors.
53 234

54 235 We use the truncated "Aborig*" to refer to common variations of "Aboriginal". We specify "Torres
55 236 Strait" to include only peoples from the Torres Strait and exclude other Islander groups. We also include
56 237 "Indigenous", "First Nations" and "First Peoples" as these terms are commonly used to refer to

238 Aboriginal and Torres Strait Islander peoples in Australia. Studies will be included if they purposefully
239 focus on Aboriginal and/or Torres Strait Islander participants. Studies that include Indigenous
240 participants internationally will only be included if they also include Aboriginal and/or Torres Strait
241 Islander participants. Studies will be included if they describe research with either ongoing or completed
242 KT processes. Discussion papers, literature reviews, commentaries and thesis will be included, while
243 protocol papers will be excluded. We additionally restrict to “Australia” and English language only. We
244 do not restrict to any research area to keep the scope as broad as possible. The inclusion criteria for this
245 scoping review are:

- 246 1. Population: (“*Aborig**” or “*Torres Strait**” or “*Indigenous*” or “*First Nation**” or “*First*
247 *People**”)
- 248 2. Concept: (“*knowledge translation*” or “*knowledge exchange*” or “*knowledge transfer*” or
249 “*knowledge mobilisation*”)
- 250 3. Context: (*Australia*)

251 252 **Search strategy**

253 Step 1 is an initial search in three online databases. We will use the ANU SuperSearch search engine
254 as it is an all-in-one academic search engine that includes 568 electronic resources. The full list of e-
255 resources and databases is available at: <[http://library-admin.anu.edu.au/e-
256 resources/index.html?showAll=GO](http://library-admin.anu.edu.au/e-resources/index.html?showAll=GO)> At Step 2, search results will be imported into EndNote, with
257 duplicates removed. Step 3 is a two-stage screening process by two separate reviewers, using the
258 inclusion criteria described above. Titles and abstracts will be scanned for eligibility for full text review.
259 To be eligible for full-text review, resources must be about KT, and must include Aboriginal and Torres
260 Strait Islander people in the study population. Any discrepancies will be discussed between the two
261 reviewers to come to a final decision. If a decision cannot be made, advice will be sought from an
262 Aboriginal and/or Torres Strait Islander researcher. At Step 4, all included resources will then undergo
263 a full-text review. Finally, Step 5 involves reviewing grey and hard to find literature that are not peer-
264 reviewed, by searching the reference lists of included material, searching Indigenous research databases
265 (Lowitja Institute Lit.Search, Trove, Aboriginal and Islander health worker journal, and Australian
266 Indigenous HealthInfoNet), and hand-searching books and chapters.

267 268 **Source of evidence selection**

269 The source selection process is detailed in Figure 1.

270 271 *Presentation of evidence*

272 We use the JBI method in conjunction with an Indigenous research methodology to firstly map and
273 summarise the overall evidence, and to secondly present evidence that are aligned with Aboriginal and
274 Torres Strait Islander worldviews. All scoping review analysis and presentation of evidence will be
275 conducted in collaboration with *Thiitu Tharmmay*.

276
277 We first follow the JBI guidance on presenting search results (for example, charting the descriptive
278 criteria of each included source). JBI note that presenting the evidence can be an “iterative process” for
279 additional data that can be usefully charted, and that the presentation of the results is “expected to be
280 further refined toward the end of the review”[19]. After charting JBI’s recommended criteria, in line
281 *Thiitu Tharmmay*’s advice, we therefore also report on evidence relevant under our Indigenous research
282 methodology. This will include whether the study worked with a community reference group during
283 the research, and whether the study centred what was important to the community in the translation
284 activities.

285
286 Presentation of scoping review results will also include calculating the distribution of articles based on
287 extracted topics. This will include the distribution of articles published per year against the type of KT
288 method (Figure 2). It will also include evidence on the research area (e.g., health, education, social
289 science), the KT definition and method for each study, and Indigeneity of participants (i.e., Aboriginal,

1
2
3 290 Torres Strait Islander, or both Aboriginal and Torres Strait Islander). Where possible we will also report
4 291 whether the article was authored by Aboriginal or Torres Strait Islander individuals and we will
5 292 privilege the articles by Aboriginal and Torres Strait Islander peoples in our analyses, through more
6 293 detailed reporting and examination of KT theory and methods used, as part of the Indigenous research
7 294 methodology (Table 1). Other additional evidence to extract, collate and present upon according to our
8 295 Indigenous research methodology is an ongoing and iterative process with *Thiitu Tharrmay*.

9 296
10 297 Transparency and readability of the scoping review results are of utmost importance for the benefit of
11 298 other Indigenous health researchers. As such, reporting of the scoping review results will follow the
12 299 PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for
13 300 Scoping Reviews) guidelines. The PRISMA-ScR contains a 20-item checklist for reporting results of a
14 301 scoping review, developed by experts following best-practice guidance on increasing quality and
15 302 transparency of research. The PRISMA-ScR guidelines helps scoping review readers “develop a greater
16 303 understanding of relevant terminology, core concepts, and key items”[21].
17 304

Table 1: Overview of scoping review results

Author	Title	Research area	KT definition	KT method	Indigeneity of participants	Indigeneity of author/s
	KT as the primary focus of the research					
	KT as a component of the research					

* Indigeneity of authors is unknown

For peer review only

Ethics and dissemination

The Mayi Kuwayu Study has ethics approvals from the Australian Institute of Aboriginal and Torres Strait Islander Studies, the ANU Human Research Ethics Committee, and from an additional 12 State and Territory committees, including relevant Aboriginal and Torres Strait Islander organisations:

1. Aboriginal Health and Medical Research Council (AH&MRC) NSW: 1268/17
2. Aboriginal Health Research Ethics Committee SA: AHREC 04-17-723
3. ACT Health 2018/ETH/00205
4. Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS): E030/22052015
5. Australian National University Human Research Ethics Committee: 2016/787
6. Central Australian Human Research Ethics Committee (CAHREC) CA-17-2810
7. Metro South, Queensland: HREC/2019/QMS/56115
8. NT Department of Health & Menzies: 2017-2804
9. Nunkuwarrin Yunti
10. St Vincent's Hospital Melbourne HREC: 132/17
11. University of Tasmania (UTAS): H0016473
12. Western Australian Aboriginal Health Ethics Committee (WAAHEC): 787

This protocol is registered with The Open Science Framework and is available at osf.io/asmp6

The results of this scoping review will be discussed with *Thiitu Tharrmay* and disseminated through a peer-review publication and Aboriginal and Torres Strait Islander community, info sheets, workshops and presentations.

Contributorship statement

MB and RL conceptualised this work. MB drafted the manuscript. RL, SB, FWL conducted the critical review of the manuscript. All authors have read and agreed to the published version of the manuscript.

Competing interests

None declared.

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References

1. Smith LT. *Decolonizing Methodologies: Research and Indigenous Peoples*. 2 ed. United Kingdom: Zed Books; 2012.
2. Walker M, Fredericks B, Mills K, Anderson D. "Yarning" as a method for community-based health research with Indigenous women: the Indigenous Women's Wellness Research Program. *Health Care Women Int*. 2014;35(10):1216-26.
3. Wilson S. *Research Is Ceremony: Indigenous Research Methods: Indigenous Resistance & Decolonization, Research & Theory, Social Work*; 2008.
4. Dudgeon P, Bray A, Darlaston-Jones D, Walker R. *Aboriginal Participatory Action Research: An Indigenous Research Methodology Strengthening Decolonisation and Social and Emotional Wellbeing*. Melbourne: Discussion Paper, The Lowitja Institute; 2020.
5. Dadich A, Moore L, Eapen V. What does it mean to conduct participatory research with Indigenous peoples? A lexical review. *BMC Public Health*. 2019;19(1):1388.
6. Straus SE, Tetroe J, Graham I. Defining knowledge translation. *Canadian Medical Association Journal* 2009;181(3-4):165-8.
7. Tait H, Williamson A. A literature review of knowledge translation and partnership research training programs for health researchers. *Health Research Policy and Systems*. 2019;17(1):98.
8. Canadian Institutes of Health Research. *Knowledge translation: definition*. Government of Canada. 2016.
9. Leadbeater BJ, Banister EM, Marshall EA. How-What-We-Know-Becomes-More-Widely-Known is Context Dependant and Culturally Sensitive. In: Leadbeater BJ, Banister EM, Marshall EA, editors. *Knowledge Translation in Context: Indigenous, Policy, and Community Settings*: University of Toronto Press; 2011.
10. Jull J, Giles A, Graham ID. Community-based participatory research and integrated knowledge translation: advancing the co-creation of knowledge. *Implementation Science*. 2017;12(1):150.
11. Shibasaki S, Sibthorpe B, Watkin Lui F, Harvey A, Grainger D, Hunter C, et al. Flipping the researcher knowledge translation perspective on knowledge use: a scoping study. *AlterNative : an international journal of indigenous peoples*. 2019;15(3):271-80.
12. Peters M, Godfrey C, McInerney P, Munn Z, Tricco A, Khalil H. Chapter 11: Scoping Reviews. In: Aromataris E, Munn Z, editors. *JBIManual for Evidence Synthesis2020*.
13. AIHW. *Measuring the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples*. Canberra: Australian Institute of Health and Wellbeing. 2009.
14. Jones R, Thurber KA, Chapman J, D'Este C, Dunbar T, Wenitong M, et al. Study protocol: Our Cultures Count, the Mayi Kuwayu Study, a national longitudinal study of Aboriginal and Torres Strait Islander wellbeing. *BMJ Open*. 2018;8.
15. Morton Ninomiya ME, Maddox R, Brascoupé S, Robinson N, Atkinson D, Firestone M, et al. Knowledge translation approaches and practices in Indigenous health research: A systematic review. *Social Science & Medicine*. 2022;301:114898.
16. Moreton-Robinson A, & Walter, M. *Indigenous Methodologies in Social Research2009*.
17. Rigney L-I. *Internationalization of an Indigenous Anticolonial Cultural Critique of Research Methodologies: A Guide to Indigenous Research Methodology and Its Principles*. *Wicazo Sa Review*. 1999;14:109-21.
18. Maiam nayri Wingara Indigenous Data Sovereignty Collective. *Indigenous Data Sovereignty Communique* Canberra, ACT2018 [Available from: <https://www.maiamnayriwingara.org/key-principles>].
19. Aromataris EM, Z. *JBIManual for Evidence Synthesis*. 2020;JBIM.

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2
3 20. Usher K, Jackson D, Walker R, Durkin J, Smallwood R, Robinson M, et al.
4 Indigenous Resilience in Australia: A Scoping Review Using a Reflective Decolonizing
5 Collective Dialogue. *Frontiers in Public Health*. 2021;9(162).
6
7 21. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA
8 Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Annals of*
9 *Internal Medicine*. 2018;169(7):467-73.
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11 12 **Figure legends**

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14 Figure 1: Source selection process

15 Figure 2: Number of KT articles published each year by inclusion/exclusion of KT method
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- Articles identified in the initial search (n=)

- Duplicates removed (n=)

- Articles retained after title and abstract screening (n=)

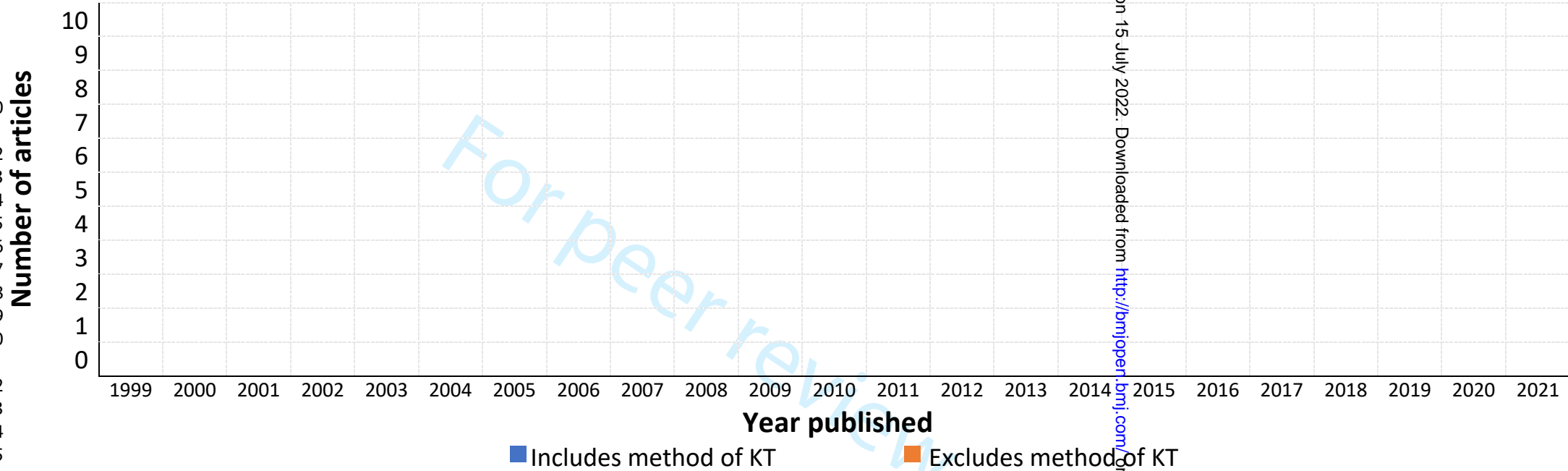
- Articles retained after full text screening (n=)

- Articles included from reference list and grey literature screening (n=)

- Final articles included (N=)

6/bmjopen-2021-060311 on 15 July 2022. Downloaded from <http://bmjopen.bmj.com/> on April 18, 2024 by guest. Protected by copyright.

Number of KT articles published per year



Supplementary File 1: Details on the Maïam nayri Wingara Indigenous Data Sovereignty Principles will be enacted within the scoping review¹

Principle 1: Demonstrate how your proposed project ensures Aboriginal and Torres Strait Islander people will exercise control (all or individual elements) of the data ecosystem.

Control: An Aboriginal and Torres Strait Islander research team control all aspects of this research. The scoping review is designed and led by an Aboriginal academic (MB Wiradjuri) and all other members of the research are Aboriginal or Torres Strait Islander (SB Gidja and Gamilaroi; FWL Torres Strait Islander with giz from Erub, Mabuiag and Badu; RL Ngiyampaa/Wongaibon).

Data stewardship: All stages of the data ecosystem will be controlled by the research team under the guidance of an Aboriginal and Torres Strait Islander governance committee *Thiitu Tharrmay* who will:

1. Be a source of expertise and advice on Aboriginal and Torres Strait Islander cultures;
2. Provide advice on the appropriate conduct of research including ensuring that the research, dissemination and policy agenda reflects Aboriginal and Torres Strait Islander community priorities and values;
3. Assist in developing the scoping review search terms and criteria;
4. Facilitate the dissemination and translation of research findings with Aboriginal and Torres Strait Islander communities and organisations;
5. Review and assist in interpreting scoping review results before publication;
6. Contribute to publications where appropriate;
7. Provide links to other relevant research, policy and practice initiatives that may benefit from scoping review results.

Data analysis: Steps 1 and 2 of the search strategy will be conducted by MB. Step 3 will be conducted by MB and RL. Steps 4 and 5 will be conducted by MB, SB, FWL and RL. Interpretation and analysis of results from the final included articles will be discussed with the Aboriginal research team and *Thiitu Tharrmay*.

Data dissemination: Aboriginal and Torres Strait Islander people will receive information from the scoping review through community focus groups, seminars and workshops; community reports; and social media posts on the results of the scoping review. Scoping review information will also be available to Aboriginal and Torres Strait Islander peoples, and non-Indigenous people, in peer reviewed journals, conferences, and policy briefs where relevant.

Principle 2: Demonstrate how your proposed project will include contextual aspects and be disaggregated (available and accessible at individual, community and Indigenous national levels).

Contextual: Any data or output will include contextual information, for example the history of research on Aboriginal and Torres Strait Islander peoples. This context will help in truth telling and explaining the story behind the data. When working with Aboriginal and Torres Strait Islander communities, they will have opportunities throughout to comment, influence and work with the data outputs, including the way the data is presented back to community members. This gives scope for community-specific contextual information.

Accessible and available: Outputs will be made available to Aboriginal and Torres Strait Islander communities through KT forums. These may involve focus groups, interviews, workshops and presentations to give the requested data back to communities in ways relevant and meaningful to them. Pending COVID travel restrictions, these KT forums will be held on site in communities to allow for as many participants attending as possible. Resources on the data and outputs will also be provided to communities in plain-language and accessible formats for wider community distribution.

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3 **Principle 3:** Demonstrate how your proposed project will empower sustainable Indigenous self-
4 determination and effective self-governance.

5 **Relevant:** The Mayi Kuwayu Study is the largest national study of Aboriginal and Torres Strait Islander
6 health and wellbeing to date. Its development came from Aboriginal and Torres Strait Islander peoples'
7 and communities' desires to have their cultures, health and wellbeing better understood – on our own
8 terms. The present scoping review is about giving this data back to stakeholders in ways relevant to
9 them. This ensures that all data from the Mayi Kuwayu Study that is translated to communities is
10 relevant to their specific contexts and needs, and reduces the burden on Aboriginal and Torres Strait
11 Islander communities. Throughout the Mayi Kuwayu Study, there has been a strong desire from partner
12 communities to have their own community-specific data given back to them in ways that are accessible
13 to their needs. This call directly relates to the scoping review: it is first necessary to understand what
14 works and what doesn't work in Aboriginal and Torres Strait Islander research contexts, in order to be
15 able to develop an effective and evidence-based knowledge translation plan
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18 **Self-determination and self-governance:** This project will contribute to Indigenous self-determination
19 and governance through Aboriginal and Torres Strait Islander control of the project as all Research
20 Team members are Aboriginal or Torres Strait Islander, and the project's governance group *Thiitu*
21 *Tharrmay* are all Aboriginal and/or Torres Strait Islander. While it is not possible to represent all the
22 diversity across the Aboriginal and Torres Strait Islander population, within these two groups are a
23 diversity of Aboriginal and Torres Strait Islander peoples, from different mobs and Countries, and with
24 different research backgrounds and expertise. This helps maintain Aboriginal and Torres Strait Islander
25 control over decisions throughout the life of the project while representing some of the diversity across
26 different mobs.
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29 **Principle 4:** Demonstrate how your proposed project has data structures that are accountable to
30 Indigenous peoples.

31 The Research Team will be guided by data storage procedures at the Australian National University
32 (ANU). Data will be stored on the ANU secure server, only accessible by approved members of the
33 research team. Data stored on the ANU secure server is backed up daily at midnight. The data is stored
34 at three geographically separate off-site Data Centres: Crisp, Huxley, and NCI. At the completion of
35 the research project, the data will be stored on the secure, password-protected shared drive for 7 years
36 after data collection, or 5 years after any publication, whichever is longer. Draft project output will be
37 provided to Aboriginal and Torres Strait Islander stakeholders including *Thiitu Tharrmay* for input and
38 feedback, prior to their finalisation and dissemination.
39

40 **Principle 5:** Demonstrate how your proposed project results are protective and respects Indigenous
41 individual and collective interests.

42 The scoping review is being conducted under a strengths-based methodology: we are looking for KT
43 practices that work for Aboriginal and Torres Strait Islander communities to be able to develop a KT
44 framework that is, from the outset, based on Aboriginal and Torres Strait Islander values, worldviews
45 and ways of knowing, being and doing. The KT framework will enable Aboriginal and Torres Strait
46 Islander communities to use Mayi Kuwayu Study data for their own individual and collective interests.
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48 Our findings will be protected after dissemination through clear and consistent messaging in peer
49 reviewed publications, reports, social media and public presentations. Any misinterpretation of findings
50 will be corrected online and in person as soon as possible, and any trolling will be removed from online
51 spaces.
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54 ¹ Available at: <https://mkstudy.com.au/dataapplicationprocess/> and
55 <https://www.maiamnayriwngara.org/key-principles>
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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	4
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	5
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	N/A The manuscript is the protocol
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	6
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	6
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	6
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	8
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	8
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe	N/A



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
		the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	8
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	7
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	8
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	N/A
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	8
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	8
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	N/A There are no results as this is a protocol
Limitations	20	Discuss the limitations of the scoping review process.	9
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	9
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	12

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: 10.7326/M18-0850.

