Communicating Cancer-Related Information with Aboriginal and Torres Strait Islander

Peoples: A Systematic Review and Meta-Synthesis

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Abstract

Australian Aboriginal and Torres Strait Islander peoples are more likely to have poorer health outcomes than non-Aboriginal people. Reasons for the health disparity include the ongoing impacts of colonisation, a lack of access to culturally appropriate health services, and language and communication barriers. Cancer is the second biggest killer of Aboriginal and Torres Strait Islander peoples, with the mortality rate for some cancers more than three times higher for Aboriginal and Torres Strait Islander than non-Aboriginal Australians. Many factors contribute to the mortality rate of Aboriginal and Torres Strait Islander peoples with cancer, including lower screening participation, a mistrust for 'Western' medical systems and later presentation, meaning the cancer is more advanced when accessing health services. This meta-synthesis aimed to explore how health professionals communicate cancer-related information with Aboriginal and Torres Strait Islander peoples, including people with cancer, their families, and communities, to identify ways to improve this communication and, in turn, improve cancer health outcomes. A systematic search of eight electronic databases, following PRISMA guidelines, was undertaken to identify eligible studies. Studies were included if they were full articles published in English in peer-reviewed journals and reported qualitative data that contained data regarding communication of cancer-related information with Aboriginal people. Communication of cancer-related information was defined as encompassing verbal and nonverbal communication, discussion of cancer risk factors and screening, explaining diagnosis and treatment options. Following screening and appraisal for methodological quality 42 studies were synthesised using a meta-aggressive approach. Findings are described and implications including suggestions for how to improve communication and suggestions for future research are also provided.

Declaration

This thesis contains no material which has been accepted for the award of any other degree of diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time.

October 2021

Contribution statement

In writing this thesis, my supervisor conceived the initial idea and aim of the research. I conducted a literature search on studies regarding the communication of cancer-related information with Aboriginal and Torres Strait Islander peoples to refine my understanding of the topic and to develop my final research question. My supervisors and I worked together to develop and register the study protocol. We then developed the initial search grid in consultation with a university liaison librarian. I refined and modified according to the indexing processes of each database to be searched. We then conducted the searches together to ensure all articles were collected and moved to the EndNote database. After I removed all duplicates, my supervisor and I co-screened a proportion of studies for inclusion. In addition, my supervisor and I assessed a proportion of studies for quality. I conducted the data extraction and developed and organised the synthesis of findings, consulting with my supervisor when needed to refine my ideas further. I decided which extracts to include and then wrote up all aspects of the thesis.

Acknowledgements

I want to take this opportunity to thank my supervisors, Dr Melissa Oxlad and Professor Deborah Turnbull, for their continued support throughout my Honours year. I also want to thank Dr Ian Olver for his time. Thanks to my friends and family for their ceaseless support.

I want to acknowledge that through my mother I am Aboriginal. My mob is the Mein:tnk and Wotjobaluk peoples. I grew up surrounded by family stretching across South Australia, Victoria, and New South Wales and my cultural background and experiences has influenced the way I approached my research. For example, I am a firm believer in reciprocity in Aboriginal research, with research being conducted in collaboration with the Aboriginal research participants, and according to needs identified by the community.

The topic of cancer in Aboriginal people is personal to me. I lost my Nanna to bowel cancer when I was in high school, and my Great-Aunt to liver cancer in my third year of undergrad. In the literature Aboriginal people generally see cancer as a death sentence. Due to my experiences this had strongly resonated with me yet surprisingly the notion of cancer being a death sentenced changed when my Aunty recently survived her breast cancer. These experiences have encouraged me to learn more about Aboriginal experiences with cancer, and communication is a vital part of healthcare.

Finally, I am not the first in my family to attend university, but I am the first to complete Honours. My grandparents never completed high school and were strong advocates for higher education. I know they would be proud of me for completing my research thesis as part of my Honours degree, but I wish I could share my academic achievements with them.

Overview

Australian Aboriginal and Torres Strait Islander peoples have poorer health outcomes than non-Aboriginal people. Reasons for the health disparity include the ongoing impacts of colonisation, a lack of access to culturally appropriate health services, language and communication barriers, and geographical locations across Australia.

Cancer is the second leading cause of death in Aboriginal and Torres Strait Islander peoples. Many factors contribute to the mortality rate, such as low rates of cancer screening participation, not presenting to health services until the cancer is advanced, low adherence to treatment courses, and some Aboriginal and Torres Strait Islander patients are required to travel to receive cancer treatment, meaning they are away from their social supports, their land, and incur costs associated with travel and accommodation. Therefore, this thesis aims to identify effective ways of communicating cancer-related information with Aboriginal and Torres Strait Islander peoples, including cancer patients and their families, and their communities.

Terminology

Aboriginal and Torres Strait Islander peoples are the first people of Australia. Australia is the largest island continent globally, and before colonisation, comprised more than 200 language groups and countries, each with its own dialect, rich history and customs, dreamtime stories, and spiritual beliefs (The Australian Institute of Aboriginal and Torres Strait Islander Studies [AIATSIS], n.d.).

The terminology used to refer to Aboriginal and Torres Strait Islander peoples is diverse, and there is no consensus across all Aboriginal and Torres Strait Islander groups in Australia about what term to use (Australian Capital Territory Council of Social Service Inc. [ACTCOSS], 2016; National Health and Medical Research Council [NHMRC], 2018). This thesis refers to Aboriginal and Torres Strait Islander peoples to be inclusive of all Aboriginal

and Torres Strait Islander Australians. Some other terms used to refer to Australia's first peoples, including in academic literature, include Aborigine(s), Native and indigenous Australians. These terms are viewed by many, the author included, to be offensive and inappropriate as they are dated and have negative historical connotations as in the case of Aborigine and Native, with indigenous not being a proper noun and being a generic term that does not acknowledge the rich diversity of Aboriginal and Torres Strait Islander peoples. ATSI as an acronym for Aboriginal and Torres Strait Islanders is also inappropriate to use, and must be written out in full (ACTCOSS, 2016; Public Health Association Australia [PHAA], 2020). Additionally, the author wishes to acknowledge the terms Aboriginal and Indigenous are disliked and viewed as inappropriate or offensive to many, and when they are not used as proper nouns, can refer to the native flora or fauna of an area (ACTCOSS, 2016; PHAA, 2020).

The author also acknowledges that not all cultures adhere to the 'Western' sex and gender binary of male and female. However, for ease of reporting the literature and discussing how cancer affects some bodies more than others, gendered language of males and females in the 'Western' sense will be used.

Metropolitan/urban locations refer to Australian major cities. The terms rural and remote encompass any land outside Australian major cities and are further categorised into inner regional and outer regional, remote, and very remote (Australian Institute of Health and Welfare [AIHW], 2019a). These categories are relevant when studying and reporting health information, particularly for this thesis on Aboriginal and Torres Strait Islander populations.

Aboriginal and Torres Strait Islander populations in Australia

As of the 2016 Australian Bureau of Statistics (ABS) Census of Population and Housing, there are 798,400 Aboriginal and Torres Strait Islander peoples making up 3.3% of the total population of Australia (ABS, 2018). Three quarters of the Aboriginal and Torres

Strait Islander population in 2016 lived in Queensland, New South Wales, and Western Australia (ABS, 2018). The Northern Territory had the highest proportion of Aboriginal and Torres Strait Islander peoples than any other state or territory, with approximately 30% of the population being Aboriginal and Torres Strait Islander (ABS, 2018). Every other state and territory in Australia had approximately 1-5% of their population made up of Aboriginal and Torres Strait Islander peoples (ABS, 2018).

Aboriginal and Torres Strait Islander culture varies across geographic locations but is collectivist and interrelated with kinship ties in immediate family and community, supportiveness, sharing and leadership (McLennan, 2015). Cultural practices include traditional and contemporary practices. Family, both immediate and wider family or community, are highly valued in Aboriginal and Torres Strait Islander culture, and the system of social and emotional supports was disrupted due to colonisation (Gee et al., 2014; National Indigenous Australians Agency [NIAA], 2017). Despite this disruption to traditional culture, support systems through kinship ties and traditional cultural values such as respect and generosity are still practised and valued (Gee et al., 2014).

Reciprocity is a cultural value held by Aboriginal and Torres Strait Islander peoples (AIATSIS, 2018; Bereton et al., 2014; Harfield et al., 2020). Reciprocity is cooperation and act of mutual exchange, in the case of this thesis, refers to the exchange of information (AIATSIS, 2018). The concept relates to how researchers can work with Aboriginal and Torres Strait Islander communities to collect data relating to their research, rather than using Aboriginal and Torres Strait Islander participants and giving nothing in return. Historically, this was how research was conducted and lead to the mistrust and fear Aboriginal and Torres Strait Islander communities feel toward researchers (NHMRC, 2018).

Reciprocity is also identified as a critical element of the principles of ethical research with Aboriginal and Torres Strait Islander peoples, along with respect for the Aboriginal and

Torres Strait Islander communities involved, equality between the researcher and the Aboriginal and Torres Strait Islander participants, the responsibility of the researchers to understand and respect Aboriginal and Torres Strait Islander systems of knowledge, survival and protection of the intellectual rights and cultural knowledge of Aboriginal and Torres Strait Islander peoples (AIATSIS, 2018; Harfield et al., 2020). Research with Aboriginal and Torres Strait Islander peoples should be mutually beneficial and engage with the local community. This means researchers can gain information relating to their research, and the Aboriginal and Torres Strait Islander community should benefit from the research and not be disadvantaged by it, in whatever form the benefits take for individuals, communities, or more broadly through the sharing of knowledge gained from the research (AIATSIS, 2018).

Health and wellbeing are holistic for Aboriginal and Torres Strait Islander peoples and encompasses the community as well as the individual (Queensland Health, 2014; NIAA, 2017). Aspects of Aboriginal and Torres Strait Islander health and wellbeing include mental, physical, cultural, and spiritual health and connection to Country (Gee et al., 2014; Queensland Health, 2014; NIAA, 2017). In addition, Aboriginal and Torres Strait Islander health and wellbeing includes respect for and knowledge of culture and kinship ties and possible related cultural dislocation, identity, lifestyle factors such as physical health (Ganesharajah, 2009).

The health outcomes and determinants of health are well established for Aboriginal and Torres Strait Islander peoples in Australia. Traditionally Aboriginal and Torres Strait Islander health has been researched and presented in a deficit model (Fogarty et al., 2018). Some research advocates for a strengths-based approach, where researchers and service providers work with Aboriginal and Torres Strait Islander communities to identify and use their existing strengths and resources (McLennan, 2015; NIAA, 2017). Taking a strengths-based approach to achieve health goals together is a way of respecting Aboriginal and Torres

Strait Islander peoples' strength, knowledge, and resilience, and helping communities to achieve the goals they view as relevant and important (McLennan, 2015).

Aboriginal and Torres Strait Islander peoples continue to face a higher burden of disease than non-Aboriginal Australians. Once such disease is cancer.

Incidence and mortality of cancer in Australia

The five most commonly diagnosed cancers in Australia are prostate cancer, breast cancer, bowel cancer, melanoma of the skin and lung cancer and equal 60% of all cancer diagnoses (Cancer Council, n.d.). In Aboriginal and Torres Strait Islander peoples, lung cancer has the highest diagnosis and mortality rate (AIHW, 2019b; Cancer Australia, n.d.). The most commonly diagnosed cancers in Aboriginal and Torres Strait Islander women are lung cancer, breast cancer, bowel cancer, and cervical cancer (Cancer Australia, n.d.). Survival rates for all cancers are 48% for Aboriginal and Torres Strait Islander peoples and 59% for non-Aboriginal Australians (AIHW, 2019b). Later diagnosis of cancer along with delayed treatment, leads to cancers being advanced by the time they are diagnosed, and this delay in diagnosis and treatment lowers the odds of survival (Lyford et al., 2018).

Cancer mortality rates in Australia are lower now than they have been in the past; this is attributed to better understanding and avoidance of cancer risk factors, cancer screening programs to detect cancers early for better treatment outcomes, and improvements in cancer treatments and care (AIHW, 2019b).

The most recent documentation regarding Australian cancer-related hospitalisations notes that very remote areas had the highest mortality rate for breast cancer, cancer of unknown primary site, head and neck cancer, liver cancer, lung cancer (AIHW, 2019b). Outer regional areas had the highest mortality rates for colorectal cancer, pancreatic cancer, and kidney cancer, and inner regional areas had highest mortality rates for melanoma of the skin, non-Hodgkin lymphoma, and prostate cancer (AIHW, 2019b). Major cities had lowest

mortality rate for cancer of unknown primary site, head and neck cancer, lung cancer and prostate cancer (AIHW, 2019b).

Aboriginal and Torres Strait Islander health, particularly cancer survival rates, are generally lower in Aboriginal and Torres Strait Islander Australians than non-Aboriginal Australians. This outcome is due to many factors, including lower education and employment opportunities and rates, higher rates of smoking among Aboriginal and Torres Strait Islander peoples, poor access to health services and varying degrees of individual health-seeking behaviours (AIHW, 2019a; 2019b).

Aboriginal and Torres Strait Islander experiences with healthcare systems

Understanding the importance of Aboriginal and Torres Strait Islander connection to Country is crucial to improving Aboriginal and Torres Strait Islander health and wellbeing (Ganesharajah, 2009; NIAA, 2017). Many Aboriginal and Torres Strait Islander peoples experience a deep and personal connection with the Country they come from, and research on Aboriginal and Torres Strait Islander health and wellbeing is beginning to highlight how important connection to Country is for Aboriginal and Torres Strait Islander peoples (Ganesharajah, 2009; NIAA, 2017).

Aboriginal and Torres Strait Islander peoples who live in rural and remote areas must travel to receive treatment, requiring them to leave their Country, communities, and social support systems (Gruen et al., 2002; Lyford et al., 2018; McGrath et al., 2015). The need to travel off-Country is a contributing factor to delayed diagnosis and missed treatment, along with communication barriers and potential experiences of racism (Durey, 2010; Gruen et al., 2002; Lyford et al., 2018).

What is known about cancer communication so far is the great difficulty of communicating cross-culturally, when the healthcare provider is non-Aboriginal (McGrath et al., 2005). Some of these difficulties become apparent when the healthcare provider must

convey difficult news with people who will be anxious and upset; non-Aboriginal healthcare providers perceive Aboriginal and Torres Strait Islander peoples as culturally shy and unlikely to speak up, barriers around language and cultural concepts, and Aboriginal and Torres Strait Islander peoples might take the health information literally (Anderson et al., 2008; McGrath et al., 2005). There needs to be improved communication of cancer-related information between healthcare providers and Aboriginal and Torres Strait Islander patients, families, and communities.

Research aims of the current study

What is currently known about the communication of cancer-related information with Aboriginal and Torres Strait Islander peoples is the challenges non-Aboriginal healthcare providers face in communicating cross-culturally. This thesis aims to fill in these gaps by investigating how cancer-related information can be effectively communicated between non-Aboriginal healthcare providers and Aboriginal and Torres Strait Islander patients, families, and communities.

Method

Study design

There are multiple approaches to synthesising qualitative research (Barnett-Page & Thomas, 2009). The meta-aggregative synthesis approach was used for this thesis. A meta-aggregative approach seeks to draw together results gained from studies through pre-defined search terms to accurately interpret the results across the studies (Pearson et al., 2011).

Themes are identified from relevant studies and grouped into categories based on similarity to synthesise information from the studies. A meta-synthesis, in this case using the meta-aggregative approach, aims to capture and interpret phenomena and use quotes and summaries from the included studies in a transparent manner, and to ensure that the outcome

of the synthesised data would be usable and useful for the study topic (Hannes & Lockwood, 2011; Pearson, 2004).

Search strategy

Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines were used in conducting this research (Moher et al., 2009). A systematic search of 8 electronic databases (CINAHL, Embase, Informit, PsychINFO, PubMed, Scopus, Sociological Abstracts, and Web of Science) was undertaken from the beginning of the database records through to May 2021, to identify studies that examined the communication of cancer-related information with Aboriginal and Torres Strait Islander peoples. Alerts were set up for each database to alert the author of new studies published after the search that may be eligible for inclusion.

Search terms were developed as appropriate for each database's indexing system and applied Boolean logic (See Table 1; full search grids are provided in Appendix A). A Research Librarian in the Faculty of Health and Medical Sciences was also conducted to increase search accuracy. The search terms used included "Aboriginal", "cancer", "communication", and "qualitative". Additionally, hand-searching of the reference lists of eligible studies was conducted to identify further eligible studies that were not captured in the initial search.
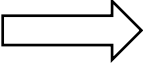
Eligibility criteria and study selection
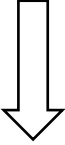
Studies were eligible for inclusion if they (i) reported data concerning communication of cancer-related information with Australian Aboriginal and Torres Strait Islander peoples, (ii) reported primary qualitative data, and (iii) were published in English in a peer-reviewed journal.

The communication of cancer-related information encompassed verbal and nonverbal communication about any aspect of cancer (i.e., risk factors, screening, diagnosis, treatment).

Table 1

Search Terms and Boolean Logic used in the Database Searches

AND →

	Cancer	Communication	Aboriginal and Torres Strait Islander peoples	Qualitative
O **R** ↓	neoplasm* cancer* malignan* tumour* psycho-oncology cancer screening	communicat* dialog* messag* interact* resource*	Indigenous* Aborigin* Torres Strait ATSI Aboriginal Australian*	qualitative* focus group* interview* thematic analys* narrative*

Note. Search terms were used in singular and plural forms.

The Aboriginal and Torres Strait Islander peoples being communicated with included Aboriginal and Torres Strait Islander cancer patients individually and their families and communities, and general cancer information shared with Aboriginal and Torres Strait Islander communities. Mixed population studies were included only if they reported Aboriginal and Torres Strait Islander-specific data separately.

Qualitative data were defined as data obtained by qualitative data collection methods (e.g., interviews or focus groups), or analysed using qualitative methods (e.g., thematic analysis, content analysis). Mixed method studies were included only if they reported qualitative data separately and in detail. Studies were excluded if they did not meet these criteria, or if they were conference abstracts.

Following PRISMA guidelines (Moher et al., 2009), the initial searches resulted in 2010 potential studies for inclusion (see Figure 1) which were imported to Endnote for screening. Following the removal of duplicates, there were 1129 unique records to be screened by titles and abstracts. The author and a research supervisor co-screened 113 articles (approximately 10% of articles) for study eligibility to reduce selection bias. The title and abstract screening interrater agreement was high (98%, $K = .95$, $p < .05$) with any

disagreements resolved via discussion. Next the full text of remaining 235 studies were further screened against the inclusion/exclusions criteria. The author and a research supervisor co-screened 12 articles (approximately 10% of full text articles); the parties agreed on all but one record and after discussion reached a consensus. The author then screened the remaining full texts articles against the inclusion/exclusion criteria. This resulted in 47 articles eligible for study reporting quality assessment. These 47 studies were then assessed for methodological reporting quality. After appraisal, five were excluded due to poor quality, leaving 42 included in the meta-synthesis.

Appraisal of study reporting quality

All studies that met the inclusion criteria were assessed for methodological reporting quality using the Qualsyst Quality Assessment Checklist (Kmet et al., 2004) to ensure studies included in this meta-synthesis satisfied a minimum standard of quality. The appraisal of methodological quality using a standardised tool is noted as critical in literature concerning synthesising data, as poor methodological quality of included studies impact the findings (Hannes & Lockwood, 2011). The Qualsyst scoring system quantifies the quality of study methods, and it is systematic in its appraisal with the quality scores being easily reproduced (Kmet et al., 2004). An acknowledged limitation to the Qualsyst tool is it can potentially introduce bias to the meta-synthesis by scoring and summarising study quality and excluding lower methodological quality (Kmet et al., 2004).

Figure 1

PRISMA flowchart
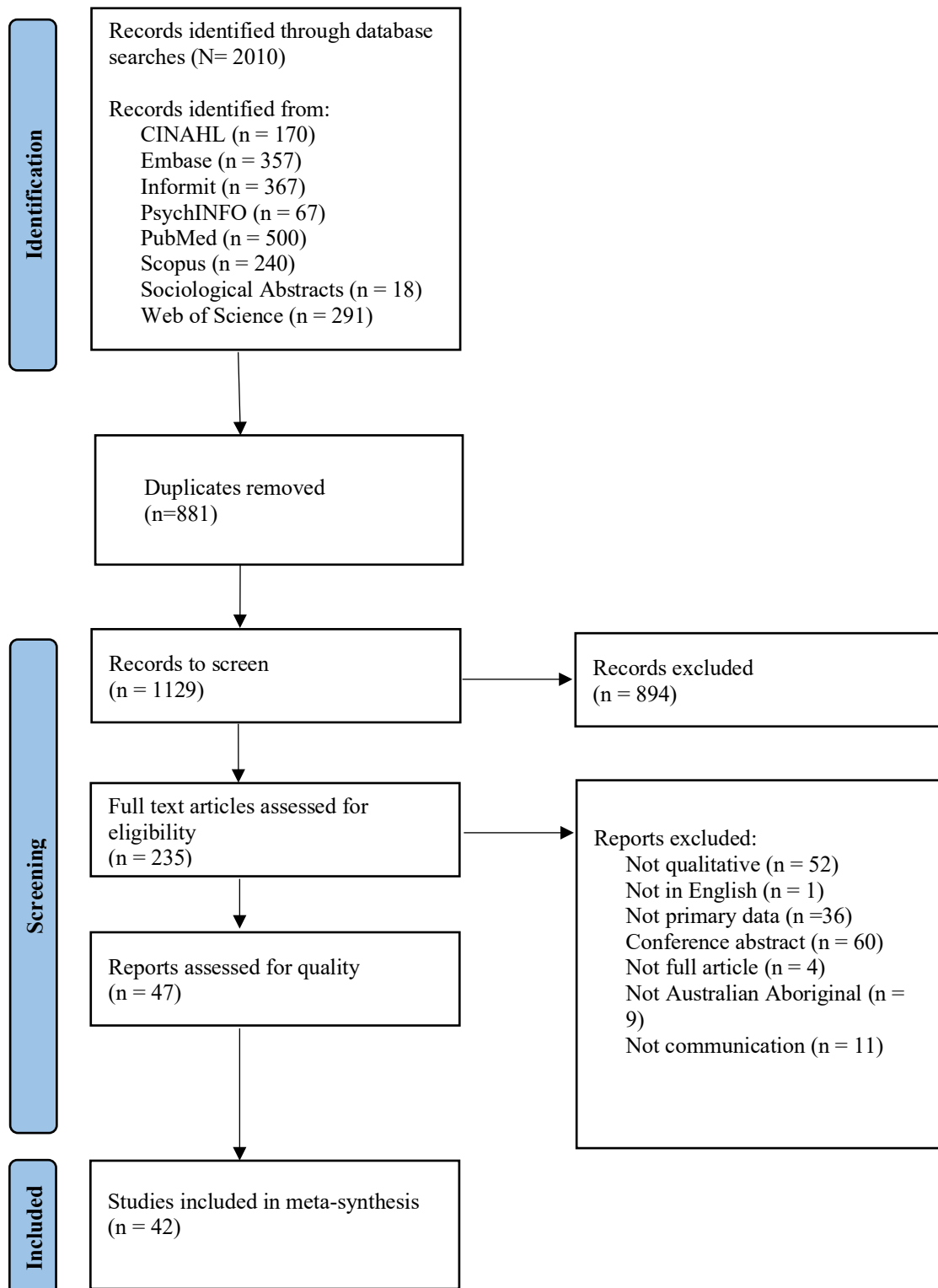
Note. This PRISMA flow diagram adapted from Moher et al. (2009) illustrates the article

identification and screening processes.

The Qualsyst tool comprises a 10-item checklist assessing the question or objective of the study, study design, context, and theoretical framework, along with the sampling strategy, method of data collection and analysis, the use of verification procedures, if the conclusion is supported by the results, and the authors' reflexivity (Kmet et al., 2004). Each item on the checklist uses the following scoring system: Yes scored as 2, Partial scored as 1, and No scored as 0. A summary score for each study was calculated by summing the total score obtained across all checklist items and dividing by 20 (the total possible score), giving a possible score of 0-1, with a higher score indicating better quality.

Methodological reporting quality assessment was undertaken by the author with 10% co-screened by a research supervisor. Kmet et al. (2004) report a liberal cut-off score of .55 and a conservative cut-off of .75. In this meta-synthesis, a minimum threshold for inclusion cut-off of .75 was chosen. Five studies did not meet the Qualsyst cut-off score of .75 when appraised for methodological quality, leaving a total of 42 for synthesis.

Data extraction and synthesis

Following PRISMA guidelines (Moher et al., 2009) a study-specific data extraction form was developed to gather relevant study characteristics and findings (see Appendix B). Data extracted from each study included specific information about (i) the study design (type of study design, method of data analysis, research question), (ii) participant information (state and location of the study and the cultural group of Aboriginal and Torres Strait Islander participants when given, participant type such as cancer patient, family or community members, healthcare provider), sample size, age, ethnicity when specified, type of cancer when given, method of recruitment).

Themes identified by the authors of each study were extracted verbatim with quotes to support each finding. Where themes were not reported findings were extracted from the authors narrative.

Results

Study characteristics

Key characteristics of the 42 included studies are provided in Table 2. The studies were published between 2000 and 2021 and originated from every state in Australia. Most studies took place in Queensland (*N studies* = 13) and Western Australia (*N studies* = 12). Qualitative data were collected via interviews (*N studies* = 41), with some including focus groups (*N studies* = 5) or case studies in addition (*N studies* = 2). Most study data were analysed using thematic analysis (*N studies* = 28), while some studies used grounded theory (*N studies* = 4).

Participant characteristics

A summary of the key characteristics of each included study are provided in Table 3. The sample consisted of a total of 2,334 participants (*N studies* = 42). Participants were aged between 18 and 80+, based on 1444 participants (*N studies* = 19) with a mean age of 50.46 (SD = 4.88). There were 572 male participants (*N studies* = 28), 1423 females (*N studies* = 29), and the gender for 339 participants were not specified (*N studies* = 11). 1696 participants were Aboriginal and Torres Strait Islander (*N studies* = 33), 214 being non-Aboriginal (*N studies* = 15), and the ethnicity for 424 participants were not specified (*N studies* = 14). A total of 333 cancer patients participated in the included studies (*N studies* = 19), with 63 carers (*N studies* = 5), 1,300 family and community members (*N studies* = 11), 591 participants were clinical/health workers (*N studies* = 26), and 47 were not specified (*N studies* = 6). Of the cancer patient participants, 174 had breast cancer (*N studies* = 10), 3 had prostate cancer (*N studies* = 2), 36 had gynaecological cancers (*N studies* =6). 28 participants had digestive system cancers (*N studies* = 5), 25 participants had cancer in the head and neck (*N studies* = 4), 28 had respiratory system cancers (*N studies* = 4), 19 had blood cancers (*N studies* = 5), 3 had brain cancers (*N studies* = 4), 4 participants had thyroid cancer (*N studies*

Table 2

Characteristics of Included Studies (N studies = 42)

Reference	State	Sample Size (N = 2,334)	Recruitment Source	Methodology		Quality appraisal
				Data collection	Data analysis	
Anderson et al., 2021	NT	104	Data from larger dataset of Indigenous cancer patients across Australia attending Cancer Treatment Services	Structured interviews supplemented by Quantitative survey demographic Qs	Thematic analysis	0.85
De Witt et al., 2020	QLD	26	Urban hospital and several Aboriginal Community Controlled Health Services (ACCHSs)	Semi-structured interviews	Thematic analysis	0.90
Dembinsky, 2014	WA	28	Geraldton Regional Medical Services and the Indigenous Women's Support Network	In-depth interviews	Thematic analysis	0.90
Dunn et al., 2017	QLD, SA, Vic, NSW, ACT, WA, Tas	31	Professional networks including Australian and New Zealand Lung Cancer Nurses Forum and Lung Foundation Australia	Semi-structured interviews	Thematic analysis	0.85
Durey et al., 2017	WA	39	Participants of a cultural safety workshop in Perth	Mixed methods	Thematic analysis	0.90
Gall et al., 2019	QLD	18	Healthcare providers in a large urban hospital	Semi-structured in-depth interviews	Interpretive phenomenological analysis	0.90
Garvey et al., 2012	QLD	54	Public hospitals, community health centres, Indigenous organisations, and the wider	Semi-structured in-depth interviews	Participant discussion	0.80

			Indigenous Queensland community			
Gonzalez et al., 2020	NSW	16	Elders group & researchers who worked in Indigenous communities	Focus group and semi-structured interviews	Inductive thematic analysis	0.95
Green et al., 2018	Vic, NT, NSW	52	National Indigenous Cancer Network (NICaN) and cancer care services	Semi-structured interviews	Iterative approach, grounded theory for coding	0.95
Haigh et al., 2016	WA	67	People involved in creating the health information DVD, health workers working in Aboriginal communities, Aboriginal and health service providers	Interviews and focus groups	Thematic analysis	0.85
Hedges et al., 2020	SA	1,011	ACCHOs	Community consultation	Thematic analysis	0.75
Ivers et al., 2019	NSW	16	Staff of the AMS, hospital oncology unit and at a local primary care organisation	Semi-structured interviews	Grounded theory	0.80
Jaenke et al., 2021	QLD, NSW, NT	13	Primary Health Care Centres (PHCCs)	Semi-structured interviews	Thematic analysis	0.90
Marcusson-Rababi et al., 2019	QLD	26	A major metropolitan hospital	Interviews	Thematic analysis guided by an interpretive phenomenological approach	1.0
McGrath et al., 2006	NT	72	An Aboriginal Health Worker coordinated with Aboriginal communities	Exploratory/open-ended interviews	Thematic analysis	0.85
McGrath et al., 2015	NT	40	Research team visits to communities	Interviews	Thematic analysis	0.90

McMichael et al., 2000	QLD	186	Member of research team's personal community contacts and professional contacts	Semi-structured interviews, case studies, focus groups	Thematic analysis	0.85
Meiklejohn et al., 2016	QLD	22	A major cancer treating hospital	Semi-structured interviews	Inductive thematic approach	0.90
Meiklejohn et al., 2018	QLD	22	a large hospital and two remote primary healthcare services	Semi-structured interviews & focus groups	Inductive thematic analysis	0.85
Meiklejohn et al., 2019	QLD	50	Community champions engaging the community, flyers, local radio station promotions of the study	Yarning forums	Thematic analysis	0.85
Meiklejohn et al., 2020	QLD	19	A large hospital and a remote primary health service	Yarning, semi structured interviews	Constant comparative methods	0.90
Meiklejohn et al., 2017	QLD	21* (+2 new participants)	A rural primary health service and large tertiary hospital in Brisbane	Yarning, semi-structured interviews	Grounded theory	0.90
Newman et al., 2013	NSW	16	ACCHSs and the oncology departments of tertiary hospitals across various geographic locations in NSW	interview	Grounded theory	0.90
Pilkington et al., 2017	WA	65	Lead researcher personal networks, Aboriginal health professionals and personal contacts around WA	Semi-structured interviews & focus groups, yarning sessions	Researchers identified concepts and lower-level categories, following the principle of "describe, compare, relate"	1.0
Reilly et al., 2018	SA	62	Aboriginal Cancer Care Coordinators, Health Services and snowball recruitment	Semi-structured interviews	Thematic analysis	0.90

Ristevski et al., 2020	VIC	15	Aboriginal community organisations and health services, Elders groups, and word of mouth.	Yarning circles	Thematic analysis	0.90
Shahid et al., 2010	WA	37*	Networks of researchers and reference group members, by health professionals, and through Aboriginal Health Services and other local support agencies	In-depth open-ended interviews	Thematic analysis	0.75
Shahid et al., 2013	WA	62	Cancer service providers, and purposively recruited from a range of locations, services, and professions.	In-depth semi-structured interviews	Thematic analysis	0.90
Shahid et al., 2011	WA	30*	networks of the researchers and reference group, through health professionals in primary or tertiary care, and some snowball recruitment	In-depth interviews/yarning	Thematic analysis	0.80
Shahid et al., 2009a	WA	37* (+7 new participants)	Various geographic locations across WA	Semi-structured interviews	Thematic analysis	0.90
Shahid et al., 2009b	WA	30	networks of the researchers and reference group, through health professionals in primary or tertiary care, and some snowball recruitment	Interviews	Thematic analysis	0.95
Shahid et al., 2016	WA	92*	Service settings in Perth and rural/remote regions of WA, and snowballing	In-depth open-ended interviews	Thematic analysis	0.90
Tam et al., 2018	QLD	122	a hospital in Queensland	Semi-structured interviews	Inductive thematic analysis	0.85

Taylor et al., 2018	National	20	Public hospitals	Open ended interviews	Inductive exploratory analysis	0.90
Taylor et al., 2020	National	32	Health service organisations	Interviews, case study	Thematic analysis	0.85
Thewes et al., 2016	NT, VIC, NSW	44	Cancer clinics	In-depth semi-structured interviews	Thematic analysis	0.80
Thompson et al., 2011	WA	30	Personal networks, community organisations in Aboriginal health, health professionals, snowball recruitment	In-depth interviews	Thematic analysis	0.85
Thompson et al., 2014	National	19	Letter sent to CEO of each Cancer Council	Interviews	Thematic analysis	0.85
Treloar et al., 2013	NSW	56	Aboriginal Medical Services (AMSs), hospital oncology services, palliative care facilities and personal networks	Interviews	Interpretive description	1.0
Ward et al., 2015	SA	94	Metropolitan Adelaide and rural and remote South Australia	Interview	Analytical toolkit was drawn from critical realism	0.85
Willis et al., 2011	NSW, NT, SA	3	6 gynaecological cancer care clinical units, through GP treating cancer patients	Semi-structured interviews	Thematic analysis	0.75
Zubrzycki, Shipp, & Jones, 2017	SE Aus.	41	Local Health Districts in the Working Together project	Semi-structured interviews	Participatory action research	1.0

* These studies used the same participants and reported different data. Only unique participant data has been counted in participant details.

Table 3

Characteristics of Participants in Included Studies*

Variable	*N* studies	*N* participants	*M* (SD)	Range
Age	19	1444	50.46 (4.88)	18-80+
Not given	24	890		
Gender				
Male	28	572		
Female	29	1423		
Not given	11	339		
Ethnicity				
Aboriginal and Torres Strait Islander	33	1696		
Non-Aboriginal	15	214		
Not specified	14	424		
Role				
Cancer patient	19	333		
Carers	5	63		
Family and community members	11	1300		
Clinical/Health worker	26	591		
Other	6	47		
Type of cancer				

Breast	10	174
Prostate	2	3
Gynaecological	6	36
Digestive system	5	28
Head and neck	4	25
Lung & other respiratory system	4	28
Blood	5	19
Brain	3	3
Thyroid	2	4
Not specified	14	107

Note. N studies = number of studies; N participants = number of participants; M = Mean; SD = standard deviation; * not all studies provided full participant characteristics data for their participants.

= 2), and there were 107 cancer patient participants with no specified cancer given (*N studies* = 14).

Quality appraisal

The 42 included studies were all of high quality and gained Qualsyst Quality Assessment scores (Kmet et al., 2004) ranging between 0.75 – 1.0 (see Table 2 and Appendix C). Four studies gained full scores across the Qualsyst checklist (approximately 10%).

All 42 studies (100%) reported appropriate study contexts, theoretical frameworks, and had conclusions drawn from the data published. 6 studies (14%) partially stated the context and research aims of the study. 2 studies (5%) partially reported appropriate study design. 8 studies (19%) gained partial scores for appropriate sampling strategies. Six studies (14%) gained partial scores for data collection, with one study scoring zero (2%). Eight studies (19%) gained partial scores for the reported data analysis with one study (2%) not gaining a score. For the reported use of verification procedures, all studies but one gained a full score (98%), and the other study gained no score (2%). The reflexivity statement scores were the lowest across the studies with five studies (12%) gaining a full score, three studies (7%) gaining partial scores, and 34 studies (81%) not gaining a score.

Synthesised findings

This meta-synthesis concerning communicating cancer-related information with Aboriginal and Torres Strait Islander peoples was derived from 42 studies that were grouped into 8 categories (Table 4), to provide the overall synthesised finding: *"Clear, simple information is essential, as is considering alternative methods of communication, building trust and relationships with Aboriginal and Torres Strait Islander peoples, involving patients' families and Aboriginal and Torres Strait Islander staff, while being culturally aware and acting with cultural sensitivity and checking patient understanding to aid in knowledge being empowering."*

Clear, simple information avoiding medical jargon must be used

Across 26 of the included studies, the need for communication to involve clear and simple language which avoids medical jargon was identified as key to aid in Aboriginal and Torres Strait Islander patient understanding (Dunn et al., 2017; Durey et al., 2017; Garvey et al., 2012; Gonzalez et al, 2020; Green et al., 2018; Haigh et al., 2016; Hedges, 2020; Ivers et al., 2019; Jaenke et al., 2021; Marcusson-Rababi et al., 2019; McGrath et al., 2006; McGrath et al., 2015; McMichael et al., 2000; Meiklejohn et al., 2016; Meiklejohn et al., 2017; Meiklejohn et al., 2018; Meiklejohn et al., 2019; Newman et al., 2013; Reilly et al., 2018; Ristevski et al., 2020; Shahid et al., 2009a; Shahid et al., 2009b; Shahid et al., 2013; Tam et al., 2018; Taylor et al., 2018; Thompson et al., 2011).

When healthcare providers communicate with Aboriginal and Torres Strait Islander patients, they must explain cancer information in "*plain language*" (Meiklejohn et al., 2019, p.4). Participants in two studies emphasised the importance of healthcare providers using language at the patients' "*level*" of understanding (Durey et al., 2017; Shahid et al., 2011) and simplifying the medical jargon as "*communication between nurses and doctors and community can get very skewed, 'cause they talk in a different language, they need to keep it simple*" (Ristevski et al., 2020, p.4).

Plain language is necessary because English is not the first language for many Aboriginal and Torres Strait Islander peoples, and interpreters may be required to communicate with patients (Durey et al., 2017; Haigh et al., 2016; Marcusson-Rababi et al., 2019; Reilly et al., 2018) and professional interpreters are not always available (Reilly et al., 2018). In these cases, it may be necessary to use untrained family members to interpret information for the patient, meaning the healthcare provider may not know if the interpreter is passing along the correct information. For example, "*Sometimes we have to use family members which isn't ideal because, again, it's all the understanding and relaying - you've no*

idea of what's actually been said to the patients in terms of emphasis" (Marcusson-Rababi et al., 2019, p.6).

As part of the need for clear and simple language, some studies identified the need for healthcare provider awareness of Aboriginal and Torres Strait Islander patients' health literacy (Gonzalez et al., 2020; Meiklejohn et al., 2016; Newman et al., 2013; Shahid et al., 2009b): *"[S]ometimes it's education ...You know, some people need to be spoon fed and some people need ...it to be repeated, so everybody is different*" (Newman et al., 2013, p.439).

When healthcare providers fail to use simplified language in discussing cancer-related information with Aboriginal and Torres Strait Islander patients, patients may not understanding what has been explained (McMichael et al., 2000; Meiklejohn et al., 2018; Reilly et al., 2018): "*They sit down, they talk to you, but the words that they say to you, you know, they don't put it in terms how I'd understand*" (McMichael et al., 2000, p.3). This lack of patient understanding may mean patients miss vital treatment information and cease treatment, leading to detrimental outcomes (Reilly et al., 2018): "*they end up passing on because they don't really understand it*" (Reilly et al., 2018, p.6).

Alternative methods of communication may be beneficial

Four included studies identified appropriate alternative methods of communicating cancer-related information with Aboriginal and Torres Strait Islander peoples (Green et al., 2018; Haigh et al., 2016; Jaenke et al., 2021; Meiklejohn et al., 2016; Shahid et al., 2013; Taylor et al., 2018; Thompson et al., 2014; Willis et al., 2011). Alternative methods included using images in addition to verbal explanations to assist in explaining cancer information (Green et al., 2018; Meiklejohn et al., 2016; Shahid et al., 2013), health promotion resources adapted to Aboriginal and Torres Strait Islander communities (Jaenke et al., 2021; Taylor et al., 2018; Thompson et al., 2014), and videos (Haigh et al., 2016; Taylor et al., 2018).

Table 4

Synthesised Findings and Categories of Communicating Cancer-Related information with Aboriginal and Torres Strait Islander peoples

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Clear, simple information is essential, as is considering alternative methods of communication, building trust and relationships with Aboriginal and Torres Strait Islander peoples, involving patients' families and Aboriginal and Torres Strait Islander staff, while being culturally aware and acting with cultural sensitivity and checking patient understanding to aid in knowledge being empowering.

- Clear, simple information avoiding medical jargon must be used

- Alternative methods of communication may be beneficial

- The importance of relationships and building trust with Aboriginal and Torres Strait Islander peoples

- The importance of involving patients' families

- Checking patient understanding is important

- Importance of involving Aboriginal and Torres Strait Islander staff

- Healthcare providers must be culturally aware and act with cultural sensitivity

- Knowledge is empowering

Additionally, three studies mentioned using community activities as an opportunity for health promotion around cancer screening (Jaenke et al., 2021; Taylor et al., 2018; Willis et al., 2011): "*We've got a big day next Tuesday, that women's play. Duck Bill and the Pussycats says it all, it's all about pap smears and cervical cancer*" (Willis et al., 2011, p.3).

The importance of relationships and building trust with Aboriginal and Torres Strait Islander peoples

Fifteen studies emphasised the importance of relationships and building trust in communicating information with Aboriginal and Torres Strait Islander peoples. Establishing rapport was identified as important to effective communication (Gall et al., 2019; Green et al., 2018; Michael et al., 2000; Meiklejohn et al., 2016; Meiklejohn et al., 2018; Zubrzycki et al., 2017). Yarning, a culturally important conversational approach, was identified as key to establishing a relationship with patients (Shahid et al., 2013; Meiklejohn et al., 2018): "*Come and have a coffee. Sit down and have a talk'...And I think that's a relief for them...And at the end of the day they do connect ... wherever you go you always know someone that they know...And that's why we always make that yarning about, 'Who's your mob? Where are you from?' make the connections straight away with someone*" (Meiklejohn et al., 2018, p.5).

Aboriginal and Torres Strait Islander community members that see Aboriginal and Torres Strait Islander and non-Aboriginal healthcare providers working together, such as Elders or Indigenous Liaison Officer and non-Aboriginal healthcare providers, increase trust and, in turn, effective communication (Green et al., 2018; Meiklejohn et al., 2016; Willis et al., 2011; Zubrzycki et al., 2017): "*I think because they were so close to the community workers ...this is what I experienced was the community did listen. And there were certain Elders within the community as well who had really close relationships with the health practitioners. And so they actually could bring people to them and that I think made a huge difference*" (Meiklejohn et al., 2016, p.6).

Developing a trusting relationship with Aboriginal and Torres Strait Islander patients and their communities takes time (Green et al., 2018; Meiklejohn et al., 2016; Shahid et al., 2013; Zubrzycki et al., 2017) and can be assisted by having an Aboriginal or Torres Strait Islander person such as an Indigenous Liaison Officer introduce non-Aboriginal healthcare providers to Aboriginal and Torres Strait Islander patients as an effective way of establishing the non-Aboriginal person as someone safe and trustworthy (Green et al., 2018). Another effective method of developing a relationship with patients is meeting with them in non-clinical settings (Meiklejohn et al., 2018; Shahid et al., 2013): "*...generally with Aboriginal people it works very well to actually be able to go away from the clinical environment and go and sit under the tree and just do a bit of yarning and get to know and build a relationship....things like home visits are really valuable*" (Shahid et al., 2013, p.7).

Building relationships improves communication with Aboriginal and Torres Strait Islander patients and, in turn, improves the care they receive (Green et al., 2018; Marcusson-Rababi et al., 2019): "*That's what's making us provide as optimal care as we can is if we stop thinking we're just treating cancer. We're treating our patient, and what could we do that helps this particular patient through?.... that just comes with relationships and communication*" (Green et al., 2018, p.7). Another important factor in developing and maintaining rapport with Aboriginal and Torres Strait Islander patients is continuity of care (Shahid et al., 2013; Shahid et al., 2009a; Shahid et al., 2016). When that is not possible, it helps to have the trusted healthcare providers inform the patient that the person taking their place is also trustworthy (Shahid et al., 2013): "*You have to explain to them that you might move on and somebody else is going to take over then they know what's going on. I think if it comes from you that they trust now and they see this person is good and they can manage with everything that should be just as all good for them*" (Shahid et al., 2013, p.8).

The importance of involving patients' families

Ten studies discussed the importance of patients' families when communicating with Aboriginal and Torres Strait Islander cancer patients. Aboriginal and Torres Strait Islander health decisions are not made by the individual but by the patients' family and communities. As such, healthcare providers must communicate with family as well as the patient (Dunn et al., 2017; Durey et al., 2017; Green et al., 2018; Shahid et al., 2013; Taylor et al., 2018; Meiklejohn et al., 2018): "*...when you support an Aboriginal person, you're not just supporting that person. You need to support the family as well along their journey*" (Green et al., 2018, p.7). Family members offer support to Aboriginal and Torres Strait Islander cancer patients and assist in understanding the medical and written information given by the healthcare provider (McGrath et al., 2015; Meiklejohn et al., 2020; Ristevski et al., 2020).

A healthcare provider participant in a study by Durey et al. (2017) stressed the importance of communicating with the patient and their family, and of gaining consent for treatment from the patients' kin: "*I take a bit more time communicating with them and their family, making sure they are comfortable with the treatment, and if not, try to get someone that can talk and explain things in their language and not assume they know what you are talking about*" (Durey et al., 2017, p.10).

When healthcare providers fail to communicate effectively with families, such as how cancer treatments are progressing, it causes distress (Dembinsky, 2014): "*... they [doctors] don't tell us in time when the treatment is not working, and then people die alone at the hospital far away from their Country without anyone they know when they die. It's disgusting!*" (Dembinsky, 2014, p.4).

Checking patient understanding is important

Six studies illustrated the importance of healthcare providers checking patients' understanding of the cancer-related information being communicated to them (Durey et al.,

2017; Gonzalez et al., 2020; Meiklejohn et al., 2016; Reilly et al., 2018; Shahid et al., 2013; Shahid et al., 2016).

Aboriginal and Torres Strait Islander patients do not always advise their healthcare providers whether they understand the information they have received and, as such, it is important for healthcare providers to check understanding and reassure patients if they do not understand (Durey et al., 2017; Shahid et al., 2013): "*I used to think that Aboriginal people were shy, but now I know that they often turn away and feel 'shame' when they don't understand something being said to them*" (Durey et al., 2017, p.9). One study identified cancer care coordinators as being able to effectively explain missed information to Aboriginal and Torres Strait Islander cancer patients, such as the importance of continuing treatment (Reilly et al., 2018): *"...the [metropolitan health service] rang me and said, "Can you get onto her, can you talk to her, we're really worried she's missing this and that." So, I go out...and I say, "Hey, look, you've got to go back. You've got to keep up with your treatment otherwise you get sick again." And she says, "Oh, true."...So she started going back again*" (Reilly et al., 2018, p.4**)**.

When patients do not fully understand the information given to them, particularly by non-Aboriginal healthcare providers, they may still agree or give the impression that they understand (Meiklejohn et al., 2016; Shahid et al., 2013; Shahid et al., 2016): "*it was difficult because often people would say 'yes I understand' and you don't know if they did"* (Shahid et al., 2013, p.6). This emphasises the importance of healthcare providers being aware of the Aboriginal and Torres Strait Islander cultural concept of shame when checking patient understanding.

Importance of involving Aboriginal and Torres Strait Islander staff

Twenty-five studies discussed the importance of Aboriginal and Torres Strait Islander staff when communicating cancer-related information with Aboriginal and Torres Strait

Islander patients and their families. Aboriginal and Torres Strait Islander staff, such as Indigenous Liaison Officers can effectively communicate with Aboriginal and Torres Strait Islander peoples in a culturally safe manner, and increase patient comfort and explain information in a way that Aboriginal and Torres Strait Islander patients understand (Anderson et al., 2021; Garvey et al., 2012; Green et al., 2018; Ivers et al., 2019; Marcusson-Rababi et al., 2019; McMichael et al., 2000; Meiklejohn et al., 2016; Meiklejohn et al., 2018; Shahid et al., 2013; Shahid et al., 2016; Thompson et al., 2011; Thompson et al., 2014; Willis et al., 2011): *"I'll sit in there with her when the doctor is talking to her. And you can tell by body language if they don't understand. So I might say something, usually I'll go like, "Doctor, just for my understanding, do you mean?""* (Marcusson-Rababi et al., 2019, p.6). Additionally, Aboriginal and Torres Strait Islander staff were acknowledged to increase feelings of cultural safety in Aboriginal and Torres Strait Islander patients and communities, which encouraged Aboriginal and Torres Strait Islander peoples to participate in cancer screening and cancer-related medical procedures (Taylor et al., 2020; Thompson et al., 2011; Willis et al., 2011; Pilkington et al., 2017; Shahid et al., 2011; Shahid et al., 2016): *"A lot of women won't see [AHW] for a pap smear unless they're trained but they can at least explain to them –you know, there are some times when I wouldn't be able to do a biopsy unless I had the [Aboriginal] health worker there who can really talk to them and explain it and say 'you have to do this'"* (Willis et al., 2011, p.3).

Furthermore, Aboriginal and Torres Strait Islander staff can effectively liaise between patients and healthcare providers (Garvey et al., 2012; Ivers et al., 2019; Meiklejohn et al., 2019; Ristevski et al., 2020; Taylor et al., 2018; Taylor et al., 2020; Thompson et al., 2011; Shahid et al., 2009a): *"I know what you mean by information, doctors in the oncology unit they see it all the time but we don't... He [husband] says 'sis I don't know what's going on'*

... and I got doctors to sit down with me, had the liaison officers in our meetings with the doctors" (Meiklejohn et al., 2019, p.4).

While overall having Aboriginal and Torres Strait Islander staff involved is recommended, their involvement may need to be limited or avoided at times. For example, some types of cancer are associated with shame, particularly genital cancers, and patients are not always comfortable telling Aboriginal and Torres Strait Islander staff for fear of gossip (Jaenke et al., 2021; McGrath et al., 2015; Willis et al., 2011): ""'*Cause [it's an] Indigenous community, everybody knows everybody and they think oh, you're [going to] talk about them*" (Jaenke et al., 2021, p.3). In these cases, patients prefer to see non-Aboriginal healthcare providers (McGrath et al., 2015; Willis et al., 2011).

Healthcare providers must be culturally aware and act with cultural sensitivity

Twenty-four studies discussed cultural sensitivity as being helpful in communicating cancer-related information with Aboriginal and Torres Strait Islander peoples. Cultural sensitivity involves being aware of the differences between cultures, including understanding verbal and non-verbal cues from Aboriginal and Torres Strait Islander patients to improve communication (Durey et al., 2017; Green et al., 2018; McGrath et al., 2015; Taylor et al., 2018; Thewes et al., 2016). Other aspects of culturally sensitive care include being aware of patient needs for privacy (Shahid et al., 2013; Willis et al., 2011), healthcare providers listening to patients' background and needs (Shahid et al., 2013; Thompson et al., 2011). One study (Shahid et al. 2009a) noted younger healthcare providers treating older Aboriginal and Torres Strait Islander patients as being culturally inappropriate (Shahid et al., 2009a).

Cultural sensitivity also eases communication between Aboriginal and Torres Strait Islander peoples and healthcare providers by being aware of gender roles (Durey et al., 2017; Gonzalez et al, 2020; McMichael et al., 2000), things that may cause Aboriginal and Torres Strait Islander patients cultural shame (Durey et al., 2017; Shahid et al., 2009a; Shahid et al.,

2009b Shahid et al., 2016; Shahid et al., 2009a), and the best ways of communicating with Aboriginal and Torres Strait Islander peoples (Durey et al., 2017; Green et al., 2018): "*Ask the patient what Country are they from. This will hopefully open the doors to good communication or at least find something that you and they may have in common to discuss e.g. children Do not ask questions that require a yes or no answer [...] Patients may have the same name as someone recently deceased so we should be wary of this*" (Durey et al., 2017, p.9).

Healthcare providers cultural sensitivity around gender roles means being aware of the appropriateness of topics for female healthcare providers to discuss with male patients and vice versa, or cancer resources that are culturally inappropriate for Aboriginal and Torres Strait Islander men and women to engage in at the same time (Durey et al., 2017; Gonzalez et al, 2020; Pilkington et al., 2017; Ristevski et al., 2020; Shahid et al., 2013). Aboriginal and Torres Strait Islander women will often not attend cancer screening or treatment services if they believe only male doctors are available (Gonzalez et al., 2020; Jaenke et al., 2021; Marcusson-Rababi et al., 2019; McMichael et al., 2000; Willis et al., 2011,): "*They don't go there because maybe there is not a lady doctor there to see them*" (Gonzalez et al, 2020, p.6).

In addition, cancer treatments that require the removal of hair or body parts, such as shaving the genital region before surgery, is profoundly inappropriate (McGrath et al., 2015): "*not really culturally okay to have that shaved thing*" (McGrath et al., 2015, p.5). Also, breast, gynaecological and prostate cancers are viewed as a source of shame and embarrassment for Aboriginal and Torres Strait Islander peoples. However, the shame caused by breast cancer is reducing due to widespread media coverage (Shahid et al., 2016).

Cancer, particularly bowel cancer and cancers around the breasts or genitals, is seen as a taboo topic among many Aboriginal and Torres Strait Islander communities, and as such, communication of cancer information is challenging (Gonzalez et al., 2020; Haigh et al.,

2016; Pilkington et al., 2017; Treloar et al., 2013). Fear of cancer contributes to the taboo status (Hedges, 2020; Shahid et al., 2009b), and in some communities, cancer is better referred to as sickness: "*For example, our study team are aware that some communities would rather use the word 'throat sickness' instead of throat cancer*" (Hedges, 2020, p.6).

In hospital settings, access to gardens or other outdoor settings is a culturally appropriate way to help Aboriginal and Torres Strait Islander patients to feel more relaxed and better able to communicate information (Gonzalez et al., 2020; Taylor et al., 2018): "*[the Indigenous cancer patients] may not come into the hospital environment at all . . . we will sit outside and just yarn . . . [it was] a change of culture for all of us . . . leaving our documentation behind. Not having our papers, just going and really hearing what patients are [telling us]*" (Taylor et al., 2018, p.6).

Knowledge is empowering

Twelve included studies highlighted knowledge as being empowering. Aboriginal and Torres Strait Islander peoples who learn more about cancer-related information share that information with their communities (Anderson et al., 2021; Hedges, 2020; Jaenke et al., 2021; Meiklejohn et al., 2019; Pilkington et al., 2017; Ristevski et al., 2020; Zubrzycki et al., 2017): "*If you want to get a message out to different groups, one of the best ways for us to do it is to actually do the education to the women who are running the women's groups [...] My big thing is constantly working with the Aboriginal women who are within the service, and empowering them with knowledge so they can go on and pass on that information*" (Jaenke et al., 2021, p.5).

Additionally, Aboriginal and Torres Strait Islander patients who are better informed about cancer-related information feel empowered to approach their doctor and instigate screening or provision of further information (Hedges, 2020; Meiklejohn et al., 2020; Tam et

al., 2018); "*being in control to ask more questions of their doctor. Having their doctor undertake investigations, as a preventive measure*" (Hedges, 2020, pg. 7).

Healthcare providers felt empowered to respectfully communicate with Aboriginal and Torres Strait Islander peoples after learning about the cultural differences between Aboriginal and Torres Strait Islander and non-Aboriginal people (Durey et al., 2017): "*Learning the cultural differences; what is appropriate and what is not when communicating with Aboriginal people; methods on how we can try to find a link with them in order to gain their cooperation to achieve treatment goals. Such knowledge empowers me to provide a successful outcome in delivering radiation treatment*" (Durey et al., 2017, p.9).

Discussion

To the author's knowledge this is the first meta-synthesis to explore how cancer-related information is communicated to Aboriginal and Torres Strait Islander peoples. Findings from the included studies were aggregated into eight categories and were synthesised to find information in the literature related to communicating cancer-related information, including screening, cancer education, and discussing treatment options, with Aboriginal and Torres Strait Islander peoples.

There has been a range of consistent themes coming through the literature about the importance of relationships with Aboriginal and Torres Strait Islander peoples in family ties and between Aboriginal and Torres Strait Islander patients and non-Aboriginal healthcare providers, culturally respectful ways of approaching sensitive topics like cancer that Aboriginal and Torres Strait Islander peoples understand, and effective means of communicating health information which empowers Aboriginal and Torres Strait Islander peoples to effectively pass on health knowledge in their own communities.

The research aim of this thesis was to discover effective ways of communicating cancer-related information with Aboriginal and Torres Strait Islander peoples, including

cancer patients and their families, and their communities. When drawing together the themes emerging from the included studies, it becomes clear that involving Aboriginal and Torres Strait Islander staff, such as Aboriginal Health Workers and Indigenous Liaison Officers, in the care of Aboriginal and Torres Strait Islander peoples will likely have the greatest impact on communicating cancer-related information with Aboriginal and Torres Strait Islander peoples.

If Aboriginal and Torres Strait Islander peoples are involved in the care of Aboriginal and Torres Strait Islander peoples, in partnership with non-Aboriginal healthcare providers, then issues around cultural sensitivity and miscommunications in patient understanding become greatly reduced (Abbott et al., 2007; Durey, 2010; Lyford et al., 2018). Aboriginal and Torres Strait Islander staff can bridge the gap in understanding and communication between healthcare providers and Aboriginal and Torres Strait Islander patients, and advocate for their personal and cultural needs, such as having the family or community involved in treatment decision making, and end-of-life care (Abbott et al., 2017; Queensland Health, 2014; NIAA, 2017).

Three included studies in the meta-synthesis indicated that the mere presence of Aboriginal and Torres Strait Islander staff in medical services increase feelings of cultural safety, which increases the likelihood of Aboriginal and Torres Strait Islander patients attending the health service (McMichael et al., 2000; Meiklejohn et al., 2016; Pilkington et al., 2017). Aboriginal Health Workers and Indigenous Liaison Officers can identify relevant cultural needs of Aboriginal and Torres Strait Islander patients that non-Aboriginal healthcare providers may not be aware of and share these with the healthcare providers to improve patient outcomes (Abbott et al., 2017; Queensland Health, 2014; NIAA, 2017). Additionally, the geographical and cultural variance of Aboriginal and Torres Strait Islander communities across Australia means broad and generic health information may not be relevant to local

communities, and. Aboriginal and Torres Strait Islander staff can advise non-Aboriginal healthcare providers on cultural sensitivities relevant to their particular and local community (NIAA, 2017).

It is not always feasible to have Aboriginal and Torres Strait Islander staff working in conjunction with non-Aboriginal healthcare providers. As identified in the included studies (McGrath et al., 2015) and literature (Queensland Health, 2014) there are times when Aboriginal and Torres Strait Islander patients are not comfortable seeing Aboriginal and Torres Strait Islander staff members due to shame and the fear of the Aboriginal and Torres Strait Islander staff member gossiping. In these cases, Aboriginal and Torres Strait Islander patients prefer to see non-Aboriginal healthcare providers to avoid the fear of gossip and shame in their communities. Therefore, providing choice is a means to empower patients.

Empowering Aboriginal and Torre Strait Islander patients to make their own choices about their health and treatment options by providing them with information they understand, and having their choices respected by healthcare providers, is a means to contribute toward Aboriginal and Torres Strait Islander self-determination. Self-determination is a way Aboriginal and Torres Strait Islander peoples can work toward reclaiming their right to live according to their traditional customs and values that were disrupted in the process of colonisation (Victorian Public Sector Commission, 2018).

When the involvement of Aboriginal and Torres Strait Islander staff is not feasible, the next most important theme emerging from this study is cultural sensitivity. Non-Aboriginal and Torres Strait Islander healthcare workers should be aware of the cultural differences between themselves and the Aboriginal and Torres Strait Islander patients as well as their own stereotypes and how that might impact the provision of care (Australian Healthcare Associates [AHA], 2019). Differences in culture between Aboriginal and Torres Strait Islander and non-Aboriginal people include the differing priorities of healthcare and

caring for others before seeking healthcare for the individual (Treloar et al., 2013). Along with the cultural differences and stereotypes, healthcare workers need to be mindful of assumptions they make about what Aboriginal and Torres Strait Islander patients do and do not understand, and what information they will value rather than what the non-Aboriginal healthcare provider thinks they should share (AHA, 2019; Queensland Health, 2014; Ward et al., 2015). Many organisations and services provide cultural training to its staff. If this is not happening, staff need to be empowered to seek out appropriate training to improved cultural care to Aboriginal and Torres Strait Islander patients.

Methodological strengths and limitations

This qualitative meta-synthesis followed the PRISMA guidelines (Moher et al., 2009) which increased the robustness of the findings. The categories that had been synthesised into eight categories appeared frequently over the 42 included studies, and logically followed into the overarching finding of Aboriginal and Torres Strait Islander staff being critical to communicating cancer-related information with Aboriginal and Torres Strait Islander peoples. The methodological quality of the studies was appraised and only those that met the conservative cut-off score of 0.75 were included in the synthesis and aggregated findings (Kmet et al., 2004). This is in keeping with the guidance provided by Hannes and Lockwood (2011) where the quality of the included studies will impact the quality of the findings. The methodological quality was very high over all the included studies, and four studies had a quality of 1, the highest score the Qualsyst quality appraisal can give (Kmet et al., 2004).

The current meta-synthesis is limited by the sample populations used in some of the included studies. Due to small communities participating in the studies and the need for confidentiality in research, some participant details were omitted. In one study, 1,100 participants were given as community members and further demographic data were not given. The only studies eligible for inclusion in the meta-synthesis were peer-reviewed, so

grey literature was not pursued, and published in English for practicality purposes. One study met the eligibility criteria otherwise but was excluded based on not being in English.

The omission of grey literature is a limitation as it may have offered other insights to the effective ways of communicating cancer-related information with Aboriginal and Torres Strait Islander peoples, including cancer patients and their families, and their communities.

Due to time constraints, the Centre of Research Excellence in Aboriginal Chronic Disease Knowledge Translation and Exchange (CREATE) Quality Appraisal Tool (Harfield et al., 2020) was not used. The CREATE Quality Appraisal Tool is a standardised tool used to appraise the methodology of included studies from an Aboriginal and Torres Strait Islander perspective. This tool was designed specifically for health research that includes Aboriginal and Torres Strait Islander participants and examines the quality and cultural appropriateness of a study (Harfield et al., 2020). If there was enough time, the CREATE Quality Appraisal Tool would have been used in conjunction with a standardised methodological appraisal tool such as the Qualsyst Tool (Kmet et al., 2004), to judge articles based on their methodological rigour and on their cultural appropriateness. The CREATE Quality Appraisal Tool reflects the cultural values held by Aboriginal and Torres Strait Islander peoples (Harfield et al., 2020) and would have made a significant contribution to the cultural appropriateness of the studies included in this thesis, as the CREATE Quality Appraisal Tool is the only known quality appraisal tool for use with Aboriginal and Torres Strait Islander research (Harfield et al., 2020).

Future directions

Though the included studies were not appraised for their reciprocity and cultural appropriateness in working with Aboriginal and Torres Strait Islander research participants, this and any prospective articles provides synthesised knowledge and recommendations that can be 'given back' to Aboriginal and Torres Strait Islander communities through sharing the

knowledge gained from high quality studies. The findings of this thesis will also be able to contribute to improved healthcare for Aboriginal and Torres Strait Islander peoples, improved communication between Aboriginal and Torres Strait Islander peoples and non-Aboriginal healthcare providers, and further improve culturally safe and relevant cancer care provision. This has the potential to improve healthcare for Aboriginal and Torres Strait Islander peoples, improve communication between Aboriginal and Torres Strait Islander peoples and non-Aboriginal and Torres Strait Islander healthcare providers, and further improve culturally safe and relevant cancer care provision.

Future research could be conducted to investigate the outcomes of utilising the effective ways of communicating cancer-related information with Aboriginal and Torres Strait Islander peoples as identified in this meta-synthesis. Additionally, further research and/or accountability could be conducted by consulting with an Aboriginal and Torres Strait Islander reference group or conducting a community consultation with Aboriginal and Torres Strait Islander community members to gain feedback on the themes identified as effective ways of communicating cancer-related information with Aboriginal and Torres Strait Islander peoples.

It would also be useful to conduct further research on the effectiveness of Aboriginal and Torres Strait Islander staff in healthcare services, Health Workers and Aboriginal Liaison Officers on improving the communication of cancer-related information, focusing on how Aboriginal and Torres Strait Islander staff are able to bridge the gap in communication between healthcare providers and patients.

Implications

The eight key themes identified in this meta-synthesis are critical for improving the communication of cancer-related information with Aboriginal and Torres Strait Islander peoples. When Aboriginal and Torres Strait Islander patients do not feel culturally safe in

healthcare settings, they do not attend for appointments or treatment. They can also inform others within their kinship networks not to attend due to the lack of cultural safety experienced, contributing to treatment barriers and non-treatment.

Aboriginal and Torres Strait Islander staff are necessary for increasing cultural safety in healthcare services, which will in turn increase the number of Aboriginal and Torres Strait Islander peoples attending these services.

When Aboriginal and Torres Strait Islander staff are not available to help bridge the gap of communication between Aboriginal and Torres Strait Islander patients, families and communities and non-Aboriginal healthcare providers, then it is crucial for non-Aboriginal healthcare providers to develop a rapport with their patients which will ease communication barriers. Part of developing a rapport with Aboriginal and Torres Strait Islander patients means understanding that developing trust and relationships takes time and is key for Aboriginal and Torres Strait Islander patient feelings of cultural safety (Bereton et al., 2014).

The use of clear, easy to understand language that avoids the use of jargon is particularly important non-Aboriginal healthcare providers are communicating cancer-related information, which can be jargon heavy and challenging for Aboriginal and Torres Strait Islander peoples with varying levels of health literacy. It is also critical that non-Aboriginal healthcare providers are aware of the cultural implications of what and how they are communicating with patients. Information must be shared with family members along with the patient to avoid confusion and distress. Additionally, gender roles particularly for those from traditional communities may also be a safety consideration. For example, an Aboriginal and/or Torres Strait Islander male may only respond to another male or need an Aboriginal and/Torres Strait Islander man present if the healthcare provider is female.

Conclusion

Moving forward to make a difference, we need to pay attention to this very strong literature which identifies recurring themes that Aboriginal and Torres Strait Islander staff should be involved in the care of Aboriginal and Torres Strait Islander patients and acknowledge that Aboriginal and Torres Strait Islander peoples are equal participants in their own care, and that, non-Aboriginal healthcare providers must learn how to provide culturally sensitive care. By applying these evidenced based approaches, communication, and care for Aboriginal patients with cancer may be improved.

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Appendices

Appendix A: Full search terms

PubMed Logic Grid

Cancer AND Communication AND Aboriginal and Torres Strait islander AND Qualitative

Cancer	Communication OR culture OR language	Aboriginal and Torres Strait Islander	Qualitative
"neoplasms"[mh] OR neoplasm*[tiab] OR cancer*[tiab] OR malignan*[tiab] OR tumour*[tiab] OR tumor*[tiab] OR carcinoma*[tiab] OR lymphoma*[tiab] OR leukaemia*[tiab] OR leukemia*[tiab] OR melanoma*[tiab] OR haematolog*[tiab] OR sarcoma*[tiab] OR oncol*[tiab] OR psycho-oncology[tiab] OR psychooncology[tiab] OR cancer screening[tiab] OR cancer prevention[tiab]	"communication"[mh] OR communicat*[tiab] OR dissemin*[tiab] OR messag*[tiab] OR advice[tiab] OR info*[tiab] OR interact*[tiab] OR dialog*[tiab] OR discourse*[tiab] OR educat*[tiab] OR promo*[tiab] OR intervention*[tiab] OR resource*[tiab] OR strateg*[tiab] OR collaborat*[tiab] OR traditional medicine[tiab] OR cross-cultural medicine[tiab] OR community health service*[tiab] OR health care delivery[tiab] OR health services accessibility[tiab] OR health screening[tiab] OR health literacy[tiab] OR health education[tiab] OR patient navigat*[tiab] OR multicultural*[tiab] OR cultural competenc*[tiab] OR cultural safety[tiab] OR cultural awareness[tiab] OR culture[tiab] OR intercultural healthcare[tiab] OR health beliefs[tiab] OR perceived needs[tiab] OR needs assessment*[tiab] OR perception*[tiab] OR attitude*[tiab] OR language*[tiab]	"health services, Indigenous"[mh] OR Indigenous*[tiab] OR Aborigin*[tiab] OR Torres Strait[tiab] OR ATSI[tiab] OR First Australian*[tiab] OR First Nation*[tiab] OR Indigenous Australian*[tiab] OR Aboriginal Australian*[tiab] OR "indigenous peoples"[mh:noexp]	"qualitative research"[mh:noexp] OR qualitative*[tiab] OR "focus groups"[mh] OR focus group*[tiab] OR interview*[tiab] OR thematic analys*[tiab] OR content analys*[tiab] OR lived experience*[tiab] OR personal experience*[tiab] OR interpretative[tiab] OR phenomenolog*[tiab] OR analys*[tiab] OR ethnograph*[tiab] OR case stud*[tiab] OR narrative*[tiab]

PsycINFO Logic Grid

Cancer AND Communication AND Aboriginal and Torres Strait islander AND Qualitative

Cancer	Communication OR culture OR language	Aboriginal and Torres Strait Islander	Qualitative
Exp neoplasms OR cancer screening.sh OR neoplasm*.ti,ab OR cancer*.ti,ab OR malignan*.ti,ab OR tumour*.ti,ab OR tumor*.ti,ab OR carcinoma*.ti,ab OR lymphoma*.ti,ab OR leukaemia*.ti,ab OR leukemia*.ti,ab OR melanoma*.ti,ab OR haematolog*.ti,ab OR sarcoma*.ti,ab OR oncol*.ti,ab OR psycho-oncology.ti,ab OR psychooncology.ti,ab OR cancer screening.ti,ab OR cancer prevention.ti,ab	Exp communication OR communications.sh OR communication barriers.sh OR communicat*.ti,ab OR dissemin*.ti,ab OR messag*.ti,ab OR advice.ti,ab OR info*.ti,ab OR interact*.ti,ab OR dialog*.ti,ab OR discourse*.ti,ab OR educat*.ti,ab OR promo*.ti,ab OR intervention*.ti,ab OR resource*.ti,ab OR strateg*.ti,ab OR collaborat*.ti,ab OR traditional medicine.ti,ab OR cross-cultural medicine.ti,ab OR community health service*.ti,ab OR health care delivery.ti,ab OR health services accessibility.ti,ab OR health screening.ti,ab OR health literacy.ti,ab OR health education.ti,ab OR patient navigat*.ti,ab OR multicultural*.ti,ab OR cultural competenc*.ti,ab OR cultural safety.ti,ab OR cultural awareness.ti,ab OR culture.ti,ab OR intercultural healthcare.ti,ab OR health beliefs.ti,ab OR perceived needs.ti,ab OR needs assessment*.ti,ab OR perception*.ti,ab OR attitude*.ti,ab OR language*.ti,ab	Indigenous populations.sh OR Indigenous*.ti,ab OR Aborigin*.ti,ab OR Torres Strait.ti,ab OR ATSI.ti,ab OR First Australian*.ti,ab OR First Nation*.ti,ab OR Indigenous Australian*.ti,ab OR Aboriginal Australian*.ti,ab OR Indigenous health.ti,ab	qualitative methods.sh. or qualitative*.ti,ab. or exp focus group/ or exp interviews/ or focus group*.ti,ab. or interviews.sh. or interview*.ti,ab. or thematic analysis.sh. or thematic analys*.ti,ab. or content analysis.sh. or content analys*.ti,ab. or lived experience*.ti,ab. or personal experience*.ti,ab. or interpretative phenomenological analysis.sh. or interpretative phenomenolog* analys*.ti,ab. or ethnography.sh. or ethnograph*.ti,ab. or case stud*.ti,ab. or narratives.sh. or narrative*.ti,ab.

Embase Logic Grid

Cancer AND Communication AND Aboriginal and Torres Strait islander AND Qualitative

Cancer	Communication OR Culture OR language	Aboriginal and Torres Strait Islander	Qualitative
"malignant neoplasm"/exp OR neoplasm*:ti,ab OR cancer*:ti,ab OR malignan*:ti,ab OR tumour*:ti,ab OR tumor*:ti,ab OR carcinoma*:ti,ab OR lymphoma*:ti,ab OR leukaemia*:ti,ab OR leukemia*:ti,ab OR melanoma*:ti,ab OR haematolog*:ti,ab OR sarcoma*:ti,ab OR oncol*:ti,ab OR "psycho-oncology":ti,ab OR psychooncology:ti,ab OR "cancer screening":ti,ab OR "cancer prevention":ti,ab	"interpersonal communication"/exp OR communicat*:ti,ab OR dissemin*:ti,ab OR messag*:ti,ab OR advice:ti,ab OR info*:ti,ab OR interact*:ti,ab OR dialog*:ti,ab OR discourse*:ti,ab OR educat*:ti,ab OR promot*:ti,ab OR intervention*:ti,ab OR resource*:ti,ab OR strateg*:ti,ab OR collaborat*:ti,ab OR "traditional medicine":ti,ab OR "cross-cultural medicine":ti,ab OR "community health service*":ti,ab OR "health care delivery":ti,ab OR "health services accessibility":ti,ab OR "health screening":ti,ab OR "health literacy":ti,ab OR "health education":ti,ab OR "patient navigat*":ti,ab OR multicultural*:ti,ab OR "cultural competenc*":ti,ab OR "cultural safety":ti,ab OR "cultural awareness":ti,ab OR culture:ti,ab OR "intercultural healthcare":ti,ab OR "health beliefs":ti,ab OR "perceived needs":ti,ab OR "needs assessment*":ti,ab OR perception*:ti,ab OR attitude*:ti,ab OR language*:ti,ab	"Indigenous Australian"/exp OR Indigenous*:ti,ab OR Aborigin*:ti,ab OR "Torres Strait":ti,ab OR ATSI:ti,ab OR "First Australian*":ti,ab OR "First Nation*":ti,ab OR "Indigenous Australian*":ti,ab OR "Aboriginal Australian*":ti,ab OR "ATSI":ti,ab	"qualitative research"/de OR "qualitative*":ti,ab OR "focus group*":ti,ab OR "interview"/de OR "interview*":ti,ab OR "thematic analysis"/de OR "thematic analys*":ti,ab OR "content analysis"/de OR "content analys*":ti,ab OR "personal experience"/de OR "personal experience*":ti,ab OR "lived experience*":ti,ab OR "interpretative phenomenology* analys*":ti,ab OR "ethnography"/de OR ethnograph*:ti,ab OR "case study"/de OR "case stud*":ti,ab OR "narrative"/de OR "narrative*":ti,ab

CINAHL with full text Logic Grid

Cancer AND Communication AND Aboriginal and Torres Strait islander AND Qualitative

Cancer	Communication OR culture OR language	Aboriginal and Torres Strait Islander	Qualitative
MH neoplasms+ OR TI neoplasm* OR AB neoplasm* OR TI cancer* OR AB cancer* OR TI malignan* OR AB malginan* OR TI tumour* OR AB tumour* OR TI tumor* OR AB tumor* OR TI carcinoma* OR AB carcinoma* OR TI lymphoma* OR AB lymphoma* OR TI leukaemia* OR AB leukaemia* OR TI leukemia* OR AB leukemia* OR TI melanoma* OR AB melanoma* OR TI haematolog* OR AB haematology* OR TI sarcoma* OR AB sarcoma* OR TI oncol* OR AB oncol* OR TI "cancer screening" OR AB "cancer screening" OR TI "cancer prevention" OR AB "cancer prevention" OR TI "psycho-oncology" OR AB "psycho-oncology" OR TI psychooncology OR AB psychooncology	MH communication+ OR TI communicat* OR AB communicat* OR TI dissemin* OR AB dissemin* OR TI messag* OR AB messag* OR TI advice OR AB advice OR TI inform* OR AB inform* OR TI interact* OR AB interact* OR TI dialog* OR AB dialog* OR TI discourse* OR AB discourse* OR TI educat* OR AB educat* OR TI promo* OR AB promo* OR TI intervention* OR AB intervention* OR TI resource* OR AB resource* OR TI strateg* OR AB strateg* OR TI collaborat* OR AB collaborat* OR TI "traditional medicine" OR AB "traditional medicine" OR TI "cross-cultural medicine" OR AB "cross-cultural medicine" OR TI "community health service*" OR AB "community health service*" OR TI "health care delivery" OR AB "health care delivery" OR TI "health services accessibility" OR AB "health services accessibility" OR TI "health screening" OR AB "health screening" OR TI "health literacy" OR AB "health literacy" OR TI "health education" OR AB "health education" OR	MH "First Nations of Australia+" OR TI Indigenous* OR AB Indigenous* OR TI Aborigin* OR AB Aborigin* OR TI "Torres Strait" OR AB "Torres Strait" OR TI ATSI OR AB ATSI OR TI "First Australian*" OR AB "First Australian*" OR TI "First Nation*" OR AB "First Nation*" OR TI "Indigenous Australian*" OR AB "Indigenous Australian*" OR TI "Aboriginal Australian*" OR AB "Aboriginal Australian*"	MH "qualitative studies" OR TI "qualitative" OR AB "qualitative" OR MH "focus groups" OR TI "focus group*" OR AB "focus group*" OR MH "interviews" OR TI "interview*" OR AB "interview*" OR MH "thematic analys*" OR TI "thematic analys*" OR AB "thematic analys*" OR MH "content analysis" OR TI "content analys*" OR AB "content analys*" OR MH "life experiences" OR TI "life experience*" OR AB "life experience*" OR TI "personal experience*" OR AB "personal experience*" OR TI "interpretative phenomenology* analys*" OR AB "interpretative phenomenology* analys*" OR TI "ethnograph*" OR AB "ethnograph*" OR MH

	TI "patient navigat*" OR AB "patient navigat*" OR TI multicultural* OR AB multicultural* OR TI "cultural competenc*" OR AB "cultural competenc*" OR TI "cultural safety" OR AB "cultural safety" OR TI "cultural awareness" OR AB "cultural awareness" OR TI culture OR AB culture OR TI "intercultural healthcare" OR AB "intercultural healthcare" OR TI "health beliefs" OR AB "health beliefs" OR TI "perceived needs" OR AB "perceived needs" OR TI "needs assessment*" OR AB "needs assessment*" OR TI perception* OR AB perception* OR TI attitude* OR AB attitude* OR TI language* OR AB language*		"case studies" OR TI "case stud*" OR AB "case stud*" OR MH "narratives" OR TI "narrative*" OR AB "narrative*"

Scopus Logic Grid

Cancer AND Communication AND Aboriginal and Torres Strait islander AND Qualitative

Cancer	Communication OR culture OR language	Aboriginal and Torres Strait Islander	Qualitative
TITLE-ABS(neoplasm* OR cancer* OR malignan* OR tumo?r* OR carcinoma* OR lymphoma* OR leuk?emia* OR melanoma* OR haematolog* OR sarcoma* OR oncol* OR "psycho-oncology" OR psychooncology OR "cancer screening" OR "cancer prevention")	TITLE-ABS(Communicat* OR dissemin* OR messag* OR advi?e OR info* OR interact* OR dialog* OR discourse* OR educat* OR promo* OR intervention* OR resource* OR strateg* OR collaborat* OR "traditional medicine" OR "cross-cultural medicine" OR "community health service*" OR "health care delivery" OR "health services accessibility" OR "health screening" OR "health literacy" OR "health education" OR "patient navigat*" OR multicultural* OR "cultural competenc*" OR "cultural safety" OR "cultural awareness" OR culture OR "intercultural healthcare" OR "health beliefs" OR "perceived needs" OR "needs assessment*" OR perception* OR attitude* OR language*)	TITLE-ABS(Aborigin* OR "Torres Strait" OR Indigenous OR ATSI OR "First Australian*" OR "First Nation*" OR "Indigenous Australian*" OR "Aboriginal Australian*")	TITLE-ABS("qualitative research" OR "qualitative*" OR "focus group*" OR "interview*" OR "thematic analys*" OR "content analys*" OR "lived experience*" OR "personal experience*" OR "interpretative phenomenology* analys*" OR "ethnograph*" OR "case stud*" OR "narrative*")

Informit Logic Grid (Search full text only – Health database and Indigenous database)

Cancer AND Communication AND Aboriginal and Torres Strait islander AND Qualitative

Cancer	Communication OR culture OR language	Aboriginal and Torres Strait Islander	Qualitative
neoplasm* OR cancer* OR malignan* OR tumo*r* OR carcinoma* OR lymphoma* OR leuk*emia* OR melanoma* OR haematology* OR sarcoma* OR oncol* OR "psycho-oncology" OR psychooncology OR "cancer screening" OR "cancer prevention" OR "cancer patients"	Communicat* OR dissemin* OR messag* OR advi*e OR info* OR interact* OR dialog* OR discourse* OR educat* OR promo* OR intervention* OR resource* OR strateg* OR collaborat* OR "traditional medicine" OR "cross-cultural medicine" OR "community health service*" OR "health care delivery" OR "health services accessibility" OR "health screening" OR "health literacy" OR "health education" OR "patient navigat*" OR multicultural* OR "cultural competenc*" OR "cultural safety" OR "cultural awareness" OR culture OR "intercultural healthcare" OR "health beliefs" OR "perceived needs" OR "needs assessment*" OR perception* OR attitude* OR language*	Aborigin* OR "Torres Strait" OR Indigenous OR ATSI OR "First Australian*" OR "First Nation*" OR "Indigenous Australian*" OR "Aboriginal Australian*"	"qualitative research" OR "qualitative*" OR "focus group*" OR "interview*" OR "thematic analys*" OR "content analys*" OR "lived experience*" OR "personal experience*" OR "interpretative phenomenology* analys*" OR "ethnograph*" OR "case stud*" OR "narrative*"

Web of Science Core Collection

Cancer AND Communication AND Aboriginal and Torres Strait Islander AND Qualitative

Cancer	Communication OR culture OR language	Aboriginal and Torres Strait Islander	Qualitative
TS=(cancer* OR carcinoma* OR neoplasm* OR malignan* OR tumor* OR tumour* OR oncolog* OR "psycho-oncology" OR psychooncology OR lymphoma* OR leukaemia* OR leukemia* OR melanoma* OR haematolog* OR sarcoma* OR "cancer screening" OR "cancer prevention")	TS=(Communicat* OR dissemin* OR messag* OR advi*e OR info* OR interact* OR dialog* OR discourse* OR educat* OR promo* OR intervention* OR resource* OR strateg* OR collaborat* OR "traditional medicine" OR "cross-cultural medicine" OR "community health service*" OR "health care delivery" OR "health services accessibility" OR "health screening" OR "health literacy" OR "health education" OR "patient navigat*" OR multicultural* OR "cultural competenc*" OR "cultural safety" OR "cultural awareness" OR culture OR "intercultural healthcare" OR "health beliefs" OR "perceived needs" OR "needs assessment*" OR perception* OR attitude* OR language)	TS=(Aborigin* OR "Torres Strait" OR Indigenous OR ATSI OR "First Australian*" OR "First Nation*" OR "Indigenous Australian*" OR "Aboriginal Australian*")	TS=("qualitative research" OR qualitative* OR "focus group*" OR interview* OR "thematic analys*" OR "content analys*" OR "discourse analys*" OR "lived experience*" OR "personal experience*" OR "interpretative phenomenolog* analys*" OR ethnograph* OR "case stud*" OR narrative*)

Sociological Abstracts

Cancer AND Communication AND Aboriginal and Torres Strait islander AND Qualitative

Cancer	Communication OR culture OR language	Aboriginal and Torres Strait Islander	Qualitative
(cancer* OR carcinoma* OR neoplasm* OR malignan* OR tumor* OR tumour* OR oncolog* OR "psycho-oncology" OR psychooncology OR lymphoma* OR leukaemia* OR leukemia* OR melanoma* OR haematolog* OR sarcoma* OR "cancer screening" OR "cancer prevention")	(Communicat* OR dissemin* OR messag* OR advi*e OR info* OR interact* OR dialog* OR discourse* OR educat* OR promo* OR intervention* OR resource* OR strateg* OR collaborat* OR "traditional medicine" OR "cross-cultural medicine" OR "community health service*" OR "health care delivery" OR "health services accessibility" OR "health screening" OR "health literacy" OR "health education" OR "patient navigat*" OR multicultural* OR "cultural competenc*" OR "cultural safety" OR "cultural awareness" OR culture OR "intercultural healthcare" OR "health beliefs" OR "perceived needs" OR "needs assessment*" OR perception* OR attitude* OR language)	(Aborigin* OR "Torres Strait" OR Indigenous OR ATSI OR "First Australian*" OR "First Nation*" OR "Indigenous Australian*" OR "Aboriginal Australian*")	("qualitative research" OR qualitative* OR "focus group*" OR interview* OR "thematic analys*" OR "content analys*" OR "discourse analys*" OR "lived experience*" OR "personal experience*" OR "interpretative phenomenology* analys*" OR ethnograph* OR "case stud*" OR narrative*)

Appendix B: Data extraction form

Person Extracting Data	Date of Data Extraction	Year of Study Publication
Title:		
Author:		
Reference:		
Other Publications from same study:		
Study Design/Description		
Type of Study Design:		
Research Questions/Phenomena of Interest		
Method of Data Analysis:		
Study Location, State, people:	**Sample Size**	

Gender of participants (% or n) Male: Female:	Type of Participant Status (% or n) Cancer patient: Family/community: HCP: Other:
Age:	Ethnicity: Aboriginal: Non-Aboriginal: Not specified:
Type of cancer:	Recruitment source:
Treatment:	
Findings/Outcomes	
Authors Conclusions	
Findings	**Illustration from Publication (pg. no.)**

Appendix C: *Evaluation of Methodological Quality of Included Studies (Nstudies = 42)*

QualSyst Criteria

Reference	Question / Objective	Study Design	Context	Theoretical Framework	Sampling Strategy	Data Collection	Data Analysis	Verification Procedure	Conclusion	Reflexivity	Summary Score
Anderson et al., 2021	●	●	●	●	◐	●	●	○	●	●	0.85
De Witt et al., 2020	●	●	●	●	●	●	●	●	●	○	0.90
Dembinsky, M. (2014).	●	●	●	●	●	●	●	●	●	○	0.90
Dunn et al., 2017	●	●	●	●	◐	●	●	●	●	○	0.85
Durey et al., 2017	●	●	●	●	●	●	●	●	●	○	0.90
Gall et al., 2019	●	●	●	●	●	●	●	●	●	○	0.90
Garvey et al., 2012	●	●	●	●	●	●	○	●	●	○	0.80
Gonzalez et al., 2020	●	●	●	●	●	●	●	●	●	○	0.95
Green et al., 2018	●	●	●	●	●	●	◐	●	●	○	0.95
Haigh et al., 2016	●	●	●	●	●	●	◐	●	●	○	0.85
Hedges et al., 2020	●	●	●	●	●	○	◐	●	●	○	0.75
Ivers et al., 2019	●	●	●	●	◐	◐	●	●	●	○	0.80
Jaenke et al., 2021	●	●	●	●	●	●	●	●	●	○	0.90
Marcusson-Rababi et al., 2019	●	●	●	●	●	●	●	●	●	●	1.00
McGrath et al., 2006	●	●	●	●	●	◐	●	●	●	○	0.85

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Study											Score
McGrath et al., 2015	●	●	●	●	●	●	●	●	●	○	0.90
McMichael et al., 2000	●	●	●	●	●	●	◐	●	●	○	0.85
Meiklejohn et al., 2016	●	●	●	●	●	●	●	●	●	○	0.90
Meiklejohn et al., 2018	●	◐	●	●	●	●	●	●	●	○	0.85
Meiklejohn et al., 2019	●	●	●	●	●	●	◐	●	●	○	0.85
Meiklejohn et al., 2020	●	●	●	●	●	●	●	●	●	○	0.90
Meiklejohn et al., 2017	●	●	●	●	●	●	●	●	●	○	0.90
Newman et al., 2013	●	●	●	●	●	●	●	●	●	○	0.90
Pilkington et al., 2017	●	●	●	●	●	●	●	●	●	●	1.00
Reilly et al., 2018	●	●	●	●	●	●	●	●	●	○	0.90
Ristevski et al., 2020	●	●	●	●	●	●	●	●	●	○	0.90
Shahid et al., 2010	◐	●	●	●	●	◐	◐	●	●	○	0.75
Shahid et al., 2013	◐	●	●	●	●	●	●	●	●	○	0.90
Shahid et al., 2011	◐	●	●	●	◐	●	●	●	●	○	0.80
Shahid et al., 2009a	●	●	●	●	●	●	●	●	●	○	0.95
Shahid et al., 2009b	●	●	●	●	◐	●	●	●	●	◐	0.90

Shahid et al., 2016	●	●	●	●	●	●	●	●	●	○	0.90
Tam et al., 2018	●	●	●	●	◖	●	●	●	●	○	0.85
Taylor et al., 2018	◖	●	●	●	●	●	●	●	●	◖	0.90
Taylor et al., 2020	●	◖	●	●	●	●	●	●	●	◖	0.85
Thewes et al., 2016	●	●	●	●	◖	◖	●	●	●	○	0.80
Thompson et al., 2011	●	●	●	●	●	◖	●	●	●	○	0.85
Thompson et al., 2014	●	●	●	●	●	●	◖	●	●	○	0.85
Treloar et al., 2013	●	●	●	●	●	●	●	●	●	●	1.00
Ward et al., 2015	◖	●	●	●	●	●	●	●	●	○	0.85
Willis et al., 2011	●	●	●	●	◖	◖	◖	●	●	○	0.75
Zubrzycki et al., 2017	●	●	●	●	●	●	●	●	●	●	1.00

Note. ● = yes, ◖ = partial, ○ = no