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Review

Exploring the 'grey nomad' travelling population of Australia and its health: an integrative literature review

Margaret Yates [A,D], *Lin Perry* [B], *Jenny Onyx* [C] and *Tracy Levett-Jones* [A]

[A]Faculty of Health, University of Technology, Sydney, Broadway, Ultimo, NSW 2000, Australia.
[B]South East Sydney Local Health District and Faculty of Health, University of Technology, Sydney, Broadway, Ultimo, NSW 2000, Australia.
[C]Business School, University of Technology, Sydney, Broadway, Ultimo, NSW 2000, Australia.
[D]Corresponding author. Email: Margaret.M.Yates@student.uts.edu.au

Abstract. With increasing numbers of baby boomers retiring and taking to the road in rural and remote Australia, often for extended periods, this review aimed to identify the characteristics of these 'grey nomads' travelling across Australia, their experiences in relation to their health and social needs and their access to health care. To this end, an integrative literature review with narrative analysis was conducted. Studies of Australian grey nomad travellers published from 1999 to January 2020 were sourced from Ovid Emcare, Medline/PreMedline, Embase, PsychINFO, Academic Search Complete and Google Scholar. Fourteen records based on 11 studies described grey nomads as predominantly older heterosexual couples who defied the conventional view of aging by seeking adventure and new experiences. Many planned for their health needs while travelling, and their health was overwhelmingly reported to improve with the nomadic lifestyle. This review demonstrates the paucity of data about grey nomads. Information on travellers' health care needs and service usage is a significant gap, undermining regional and rural service planning and the provision of healthcare services, and represents a considerable challenge for healthcare providers such as GPs, pharmacies and emergency departments.

Keywords: grey nomad, health, systematic review, travellers, women.

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Introduction

Growing numbers of Australians are reported to travel domestically for extended periods of time. According to the Caravan Industry Association of Australia, the number of caravan and campervan registrations grew by 30% and 20% respectively between 2011 and 2016, totalling 615 301 combined registrations for the year to January 2016 (Williams 2017). A significant number of people owning these vehicles were likely 'grey nomads', a term commonly used to describe retired or semi-retired individuals, ≥50 years of age, who tour within Australia in caravans, campervans, motorhomes and the like for a minimum of 3 months (Onyx and Leonard 2007). However, there is no indication what proportion are long-term travellers versus short-term holidaymakers. More recently, the number of women traveller members of groups on social media has increased; for example, the Facebook groups Women Caravanning Camping and Travelling Solo Australia (8100 members), Solo Women Campers (4100 members), Chicks Camping Crew (6600 members) and Wheels Around Oz Women and Children Only (343 members). These membership numbers, posted in October 2020, reflect a more than doubling (225% increase) in the total numbers posted for these four groups in the previous year. Although the situation with COVID-19 lockdowns may reflect greater than usual vicarious travelling, a 48% increase was noted in the 5 months before COVID-19 (October 2019–February 2020). This suggests a reasonable number of Internet-enabled women are travelling. The proportion of women travellers who do not access the Internet is not reflected in these numbers and is therefore unknown. Other groups, such as travelling families who home school, are also growing, but the characteristics and travel patterns of the Australian domestic travelling population is largely unknown.

The sole review of grey nomad literature undertaken to date found only a small number of predominantly qualitative studies (Raven 2016), which cannot represent the characteristics or needs of the Australian travelling population. Although a wider body of literature discusses the North American equivalent travelling population, often referred to as 'snowbirds' and 'sunseekers', a comparison of the characteristics and activities found this population was 'quite different…despite superficial similarities' (Onyx and Leonard 2005). Onyx and Leonard (2005) identified that the North Americans have distinctly different travel and lifestyle characteristics to Australian grey nomads, tending to travel to and stay at a single destination, contrasting with the 'nomadic' Australians.

The relatively limited health infrastructure of regional, rural and remote Australia is well known. Increasing numbers of grey nomads, including women, may place a burden on already thinly spread healthcare services, but relatively little is known about travellers' health care needs and health care-seeking practices, or whether these may differ for women travellers. Given the size and growth of this whole itinerant population, it is clearly important to understand their characteristics, the reasons they travel and what it means to them, their activities, health status, health care needs and health service-seeking behaviours. Therefore, the aim of this review was to identify and appraise the available literature about this contemporary topic.

Methods

Literature review design

An integrative literature review was undertaken (Whittemore and Knapfl 2005). This form of review was chosen because it can accommodate different types of data derived from different research designs and methods.

Research aim

The aim of this review was to identify the characteristics reported of 'grey nomads' travelling across Australia and their experiences in relation to their health and social needs, as well as access to health care when travelling.

Research questions

Three questions guided the review:

(1) What are the characteristics of 'grey nomads', people who travel Australia for weeks, months or years, including their motivation for travel, distances travelled, the duration of their trips and the destinations chosen?
(2) Prior to travelling, what planning is conducted by travellers in relation to their social and health care needs, such as for medications and self-management of chronic disease?
(3) What are travellers' experiences in relation to their health and health care provision during their travels?

Literature search and review methods

In creating the search strategy, terms were organised in relation to 'Population' and 'Situation' (DiCenso *et al.* 2005).

Population

For the purpose of this review, 'grey nomads' were defined as older people who choose to travel across Australia with self-contained mobile accommodation for prolonged periods of time. Onyx and Leonard (2005) determined that the population of similar domestic travellers in North America referred to as 'snowbirds' and 'sunseekers' have distinctly different travel and lifestyle characteristics to Australian grey nomads. However, one earlier paper referred to Australians using these terms (Mings 1997), which were therefore included in the search strategy.

Situation

'Situation' refers to the descriptive characteristics of this population, and all aspects of their health, health care needs and services accessed.

Table 1. Search strategy example for Ovid PsychINFO

Search no.	Search terms
1	Grey nomad*.mp
2	(Motorhome* or camper*).mp. [mp = title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
3	(Snowbird* or Sunseeker*).mp. [mp = title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
4	((Health or ill) and health).mp. [mp = title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
5	Exp Chronic illness/ or chronic disease*.mp.
6	Long-term condition*.mp.
7	Drug therapy*.mp.
8	1 or 2 or 3
9	4 or 5 or 6 or 7
10	8 and 9

Inclusion criteria

The inclusion criteria were that papers addressed grey nomads or travellers, adult populations, males and females, and health and wellbeing topics, and that data were collected in Australia. No age criteria were set, other than that the majority of participants or mean age should be >45 years or that individuals should be described as 'retired' (chosen to exclude the younger population of backpackers and holidaymakers). Papers were required to be English language publications, published during the previous 20 years (1999–January 2020).

Exclusion criteria

Literature related to religious pilgrims and short-term holidaymakers or vacationers was excluded. No travel duration criteria were set other than, where reported, the duration should, on average, be months. Publications other than primary research were excluded (e.g. conference abstracts, discussions, commentaries, editorials, literature reviews), but the reference lists in such publications were searched for any relevant articles.

The search strategy was set up as indicated in Table 1 and run, with some minor modifications to meet individual database requirements, on five databases (Ovid Emcare, Medline and PreMedline, Embase, PsychINFO and Academic Search Complete) and the search engine Google Scholar. Search output was filtered to include the years 1999–2020.

The final search output of each database was exported to Endnote X9 (Fig. 1) and duplicates were identified and deleted. Records were then screened for eligibility, checking the title, abstract and keywords. Records not meeting the inclusion criteria or meeting the exclusion criteria were removed. All remaining full-text publications were read and discussed by two researchers (MY, LP) to reach consensus and to assess an individual publication's relevance to the research questions. Reference lists of relevant publications were hand-searched for additional studies. Papers that referred to 'snowbirds' or 'sunseekers' in North America were excluded. Fourteen articles were retained for inclusion in this study.

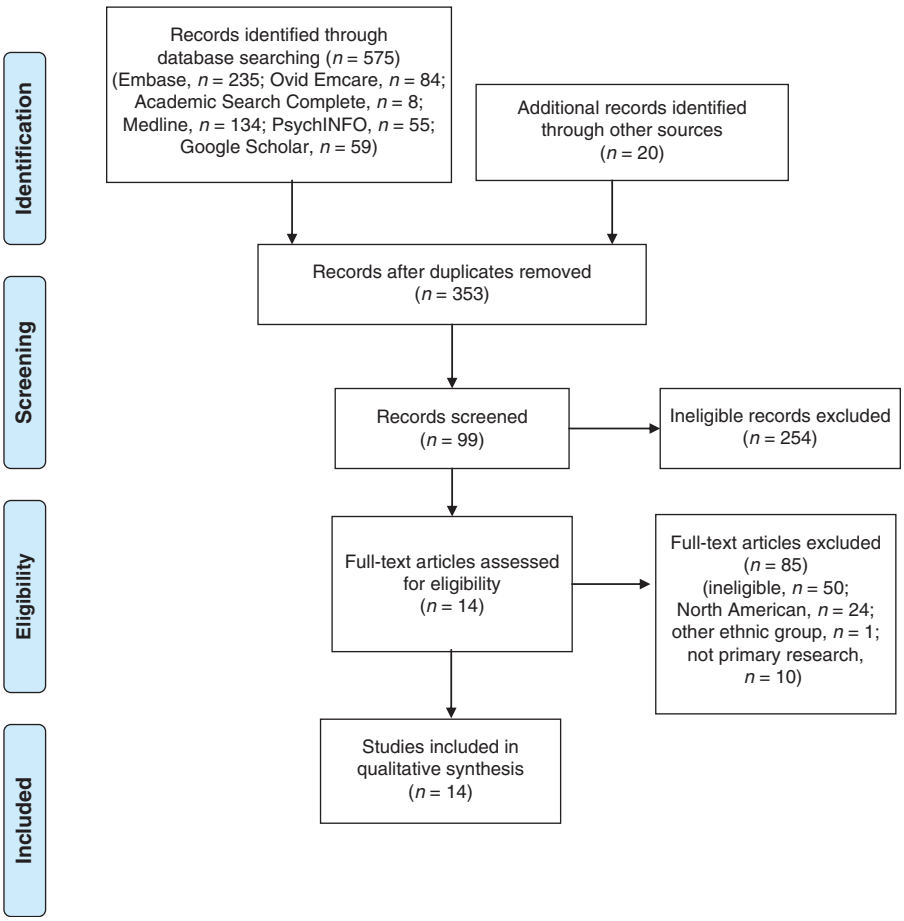

Fig. 1. Flow diagram of literature searching and screening. From Moher *et al.* (2009).

Data extraction and analysis

A data extraction table was created with headings identifying the main characteristics of each article (Table 2). Data were extracted in relation to the research questions (Table 3).

Conventional content analysis was used because this approach is suitable where there is little theory or prior literature (Hsieh and Shannon 2005). Included papers were repeatedly read and initial categories in relation to the research questions emerged from the data. Data were coded in relation to these categories. Coded data were then reviewed to identify patterns and any discrepant data, collated and summarised.

Rigor

Qualitative papers were critically appraised using the appropriate Critical Appraisal Skills Program (CASP) checklist (CASP 2020; Table 4) and for survey studies a modified version of this tool was used. Two authors (MY, LP) worked separately and compared findings in relation to screening and data extraction. A 20% sample of included publications was independently appraised by the second author (LP). Throughout the process of data extraction and content analysis, coding and analyses were discussed and consensus agreement reached among authors.

Results

Fourteen records based on 11 studies were included in the review. Two publications were doctoral theses, one using face-to-face interviews (Holloway 2009) and the other using a paper-based survey and face-to-face interviews (Cridland 2008). Five publications took an ethnographic approach (White and White 2004; Onyx and Leonard 2005, 2007; Holloway 2009; Patterson *et al.* 2011), one used grounded theory (Hillman 2013) and another two described a qualitative approach (Calma *et al.* 2018; Stephens *et al.* 2018). Six publications used surveys (Prideaux and McClymont 2006; Tate *et al.* 2006; Cridland 2008; Obst *et al.* 2008; Brayley and Obst 2010; Halcomb *et al.* 2017). Several studies combined approaches, such as participant observation, semistructured or ethnographic interviews and telephone surveys (Table 2).

Various sampling methods were used. One study used face-to-face interviews and relied on participants 'snowballing' from one couple to another (Hillman 2013). Two studies used paper-based surveys distributed by caravan park managers (Prideaux and McClymont 2006) or at a caravan show (Obst *et al.* 2008). An online survey (Halcomb *et al.* 2017) was also used to recruit participants to two further telephone interview studies (Calma *et al.* 2018; Stephens *et al.* 2018; Table 2). None of these papers

Table 2. Publications included in this study

HCP, healthcare professionals

Reference	Aim	Type of study	Setting and recruitment location	Sample and method	Data collection and analysis
White and White (2004)	Examine how mid-life and older long-term travellers describe their motivations for travelling and their experiences in outback Australia and whether their stories evidence long-term travel as a transition between endings and new beginnings	Ethnography	Observational sites included caravan parks, camping areas or campgrounds in national parks and roadside stops in the central, northern and western outback areas of Australia over a 3-month period	45 long-term travellers; participant observation, conversations and semi-structured interviews	Data were analysed thematically; the themes were guided by the conceptualisation of the study and issues emerging from the data. The transcripts and notes were read twice, recurring points of view noted and exemplars of repeating themes cited
Onyx and Leonard (2005)	Identify the motivational patterns of Australian grey nomads, and the similarities and differences with North American 'snowbirds'	Ethnographic account using in-depth taped semistructured interviews for respondents to tell their own story	One researcher travelled 16 000 km in a motorhome over 2.5 months, stopping at camping sites, free rest areas, commercial caravan parks, national parks, including some known and targeted sites, in Western Australia, the Northern Territory and Queensland	215 men, 203 women; convenience sampling using a brief survey to identify basic demographics, an ethnographic survey, with 1 questionnaire per travelling vehicle and tape-recorded in-depth interviews	The questionnaire was used to identify basic demographics, place of origin, number of weeks travelled and planned and the type of vehicle used. The narrative interview asked about what motivated people to become grey nomads
Prideaux and McClymont (2006)	Investigate the demographic characteristics of caravaners	Paper-based snapshot survey	Managers of two caravan parks in Goondiwindi distributed surveys over a 3-month period	1 person per travel party aged >16 years approached; 200 questionnaires distributed, 161 returned, 12 incomplete (74.5% response rate)	Survey instrument developed and pilot tested; no information provided
Tate *et al.* (2006)	Investigate the health burden of travellers on limited healthcare services in remote Australia	Survey (face-to-face interviews and telephone)	Survey conducted at Fitzroy Crossing River Lodge Caravan Park in the Kimberley District of Western Australia recruiting doctors and nurses in the Kimberley providing primary health care	Group 1, 260 travellers in the caravan park recruited face to face between 2.30 and 5.30pm over 5 days; Group 2, 40 doctors and 24 nurses (HCP) in the Kimberley recruited by telephone	Traveller survey items included current medical illnesses, frequency of use of medical services, written health information; HCP survey items included the importance of different components of written health information about the travellers
Onyx and Leonard (2007)	Explore the experience of grey nomads (minimum age 50 years) in relation to the literature on aging, in particular the dominant decline model of aging	Ethnographic account using in-depth taped semistructured interviews for respondents to tell their own story	One researcher travelled 16 000 km in a motorhome over 2.5 months, stopping at camping sites, free rest areas, commercial caravan parks, national parks, including some known and targeted sites, in Western Australia, the Northern Territory and Queensland	216 questionnaires; interviews of 23 couples, 2 single informants and 1 group, totalling 'some 400 travellers'	The questionnaire was used to identify basic demographics, place of origin, number of weeks travelled and planned and the type of vehicle use. The narrative interview about health status and episodes of health scares over the previous 2 years, difficulties encountered while travelling, travellers' networks, access to information and resources
Cridland (2008)	Examine the internal temporary mobility patterns of seasonal movers to northern Australia during the winter months	Surveys and face-to-face interviews	Participants recruited from caravan parks and camping sites at coastal and inland destinations in tropical Australia (above the Tropic of Capricorn)	964 grey nomads visiting or residing above the Tropic of Capricorn; questionnaire distributed, structured and semistructured audio recorded face-to-face in-depth interviews with individuals, convenience sample	Quantitative and supportive qualitative data regarding the socioeconomic/demographic status and movement patterns of grey nomads visiting different types of destinations across northern Australia
Obst *et al.* (2008)	Detail distances, trip duration and places visited by grey nomads, identify the health and road safety risks and current knowledge and management of these risks, and identification of and access to road safety information	Survey	Participants recruited at the Queensland Caravanning and Camping Show in Brisbane, June 2008	136 participants >50 years of age who had undertaken a long-term road trip in the past 2 years (93 males, 43 females); show visitors were randomly approached, invited to participate by filling out the survey and returning it to the boxes provided or by reply-paid envelope	The survey asked for demographic information, details of trips undertaken in the past 2 years, the occurrence of road or safety incidents and other issues related to road safety

Holloway (2009)	Develop insights into and arrive at provisional conclusions about how grey nomads gain meaning and pleasure from their travelling lifestyle choice	Ethnography using interviews	Participants recruited from caravan parks, camping areas in national parks, tourism sites, roadside rest areas in northern and mid-west Western Australia, Uluru and the Nullarbor	Convenience sample of 40 young (55–65 years), intermediate (65–70 years) and older (>70 years) self-drive retirees travelling with their own caravan, campervan, mobile home and/or tents	Reponses to ethnographic interviews
Brayley and Obst (2010)	Explore what travellers understood as their sense of social identify the level of community they experienced	Surveys (face to face and electronic)	Surveys distributed at recreational vehicle events and rallies and caravan parks in six states An electronic survey was distributed to membership of camping and caravan clubs	Convenience sample of 631 recreational road travellers, 50–80+ years, in six states who were also camping and caravan club members	Survey developed for the study including the Three Factor Model of Social Identity and Sense of Community Index
Patterson *et al.* (2011)	Investigate grey nomads' engagement with friends and family while 'on the road'	Ethnography and a narrative research technique	Data collected from four couples on an extended, multidestination holiday in the Northern Territory and Western Australia over a 7-week period	4 female and 4 male partners, all >50 years of age, retired or semi-retired	Narratives were used to illustrate themes about the everyday experiences of grey nomads on tour. Travel diaries, photographs and a questionnaire returned by email were all submitted at the end of the trip and thematic analysis was used
Hillman (2013)	Investigate how grey nomads in Australia perceive their health and social needs and activities when these were limited or maximised by their travel plans and aspirations	Qualitative interview study using grounded theory technique as an inductive interpretive approach	Participants recruited from a central Queensland coastal caravan park over a 2-month period	20 participants interviewed, comprising nine couples and two individuals, all >56 years of age; open-ended semi-structured in-depth face-to-face interviews accessed using 'snowballing'	18 questions included standard demographic questions, travelling times and duration, mode of transport, travelling companions and accommodation, health concerns, community engagement and social activities
Halcomb *et al.* (2017)	Explore the health needs and health planning of Australian long-term travellers and their current planning strategies for health and health care	Online survey	Participants recruited online using Facebook, Twitter, blogs, forums, web newsletters and social media, September 2015–February 2016	316 survey respondents who had been travelling continuously for ≥3 months or had done so in the past 12 months	Survey items included demographics, travel, health conditions, planning and needs; QOL-BREF (an internationally validated tool)
Calma *et al.* (2018)	Explore the experiences of grey nomads travelling with chronic conditions (i.e. older people with chronic diseases), travelling across Australia and the challenges in accessing healthcare services	Qualitative descriptive phase of a larger mixed-methods study that used telephone interviews of participants	Online survey through social media and caravanning forums, with subsequent telephone survey	33 people aged >60 years, living with at least one chronic condition and who had travelled around Australia for >3 months for the last year, recruited from social media sites and caravanning forums; potential participants were contacted randomly until data saturation was achieved (i.e. emergent themes recurred and no new patterns were evidenced)	Questions focused on health needs as they relate to chronic illness, health preparedness and well-being while travelling
Stephens *et al.* (2018)	Explore the experiences, health needs and strategies of grey nomads living with a diagnosis of cancer	Prospective qualitative phase of a larger sequential explanatory mixed-methods project using semi-structured telephone interviews	Respondents to an online survey recruited through social media and caravanning forums who agreed to a subsequent telephone survey; geographical location was not identified	14 people who self-identified with a diagnosis of cancer purposively sampled from survey respondents from social media sites and caravanning forums who had travelled around Australia for >3 months for the past year	Semistructured, in-depth interviews were conducted over 6 months in 2016 and analysed using thematic analysis

Table 3. Findings from the included publications

BMI, body mass index; BP, blood pressure; ED, emergency department; DVT, deep vein thrombosis; QoL, quality of life

Reference	Travellers' age data	Travellers' other demographic data	Travellers' duration of travel	Health planning for the trip	Health issues and concerns	Implications for healthcare services
White and White (2004)	45 interviewees in 3 major categories of mid-life and older people: parents with children; people approaching retirement; retirees; no data supplied	Not reported	Some 3 months into their journey, others 6 months, others had been travelling for ≥1 year	Not reported	Not reported	Not reported
Onyx and Leonard (2005)	Mean (±s.d.) 64.5 ± 6.3 years for males, 61.3 ± 6.1 years for females	215 men, 203 women; 93% travelled in couples, 7% (including 1 female) travelled alone; 34% from major urban centre, 33% from regional centre, 33% from rural centre; 74% travelled with caravans, 7% with motorhomes; other modes of transport: campervan, reconditioned bus, car with trailer; 66% had 4WD, 44% had vehicle <5 years old; 83% Anglo-Saxon, 12% UK born, 3% Northern European	All >3 months, 15% >1 year; the researchers themselves travelled for 2.5 months	Almost all respondents had a preprepared response for an emergency that included a communication device (e.g. CB or UHF radio) and could access the trucker's channel for help; some made special arrangements (e.g. informing local homesteads of their riskier adventures); most understood and accepted the risk associated with health and travel; all were aware of mutual support with other grey nomads by giving and receiving assistance with each other at some point	1.4% of males and 1.5% of females reported health poor; 14% of males and 9.4% of females reported health fair; 47.9% of males and 45.8% of females reported health good; 36.7% of males and 43.3% of females reported health excellent; 32% of males and 21% of females had experienced a health scare in the previous 2 years; 18 of 26 groups reported a major health issue (e.g. heart attacks, aneurism, angina, cancer, limb amputation, spinal injury, diabetes and arthritis); serious health issue often the trigger to travel	4 of 216 experienced a medical emergency (e.g. requiring helicopter evacuation, removal of gall bladder at a hospital in a town close by)
Prideaux and McClymont (2006)	89% aged 45–74 years, 4.8% younger (3.4% aged 35–44 years, 1.4% aged 18–24 years) and 6.1% older (≥75 years)	92 males, 56 females; 87.9% middle age to retirement age (45–74 years), 3.4% aged 35–44 years, 6.1% aged ≥75 years, 1.4% (2 respondents) aged 18–34 years; 72.3% retirees, 7.4% professionals, 15.6% various other occupations	Median trip length 54 days; mean length of stay exceeded 10 weeks (mean (±s.d.) 71.4 ± 80.4 days); 49% between 1 and 3 months, 19.3% between 2 and 4 weeks, 17.2% between 3 and 6 months	Not reported	Not reported	Not reported

Tate *et al.* (2006)	Median age 61.3 years	18.5% Western Australia usual place of residence; 76.9% from another state in Australia, 4.6% from outside Australia	Median length of planned trip 14 weeks	57% had sufficient medication for their entire trip; 19% had a list of medications; 9% of those with chronic illness had a health summary from their GP	55% reported chronic disease: heart disease (9.6%), diabetes (6.5%), hypertension (26.2%), lung disease (6.1%), dyslipidaemia (21.1%), mental illness (4.8%), other (16.7%)	Healthcare practitioners considered the following as important: healthcare summary (95%), pathology results (47%), active problem list (91%), allergies (92%), past medical history (87%), previous hospital admissions (31%), medication list (100%), usual GP (69%), radiology results (22%), usual specialists (30%)
Onyx and Leonard (2007)	As above (see Onyx and Leonard 2005)	As above (see Onyx and Leonard 2005)	As above (see Onyx and Leonard 2005)	As above (see Onyx and Leonard 2005)	As above (see Onyx and Leonard 2005)	As above (see Onyx and Leonard 2005)
Cridland (2008)	Mean age 65.4 years for males, 64.2 years for females; median age per vehicle 64 years	95% travelling as heterosexual couples, <2% same-sex couples, 3% singles	≤12 months	63 (18%) plan to be at specific destinations to access medical facilities, for prescriptions, GP or specialist blood tests	Grey nomad lifestyle improved their QoL and health; males more ailments than females; females higher incidence of osteoporosis and depression; 21 (5%) had no medical condition reported, 652 (75%) had ≥2 conditions, 136 (16%) had >3 conditions; 207 (25%) had 1 condition requiring ongoing medication and treatment	Not reported
Obst *et al.* (2008)	23% <55 years, 50% 56–65 years, 19% 66–70 years, 8% >70 years	93 males, 43 females aged >50 years; 80% were born in Australia, 7% were born in the UK, 5% were born in New Zealand and the remainder were from countries including Zimbabwe, Holland, Germany and the US; 38% held junior certificates, 20% held senior certificates, 15% held trade certificates, 27% had a tertiary degree	Trip duration range 1–104 weeks, median of 4 weeks; distance travelled range 600–40 000 km; 36% travelled in autumn, 28% in winter, 18% in spring and 18% in summer	Not reported	6% experienced a road crash with no injuries reported; 5% experienced a medical emergency, including minor falls (3 resulted in 2 broken bones, 1 injured knee); 1 participant had painful kidney stones; 14% experienced other health scares (e.g. chest pain, back injuries, DVT, severe arthritis, pneumonia, cervical cancer diagnosis and fainting fits)	Health issues were treated at local regional hospitals or by local GPs

(*continued next page*)

Table 3. (Continued)

Reference	Travellers' age data	Travellers' other demographic data	Travellers' duration of travel	Health planning for the trip	Health issues and concerns	Implications for healthcare services
Holloway (2009)	3 categories: young, 55–65 years; intermediate, 65–70 years; older, ≥70 years	18 heterosexual couples, 3 single males, 1 single female	Not reported	Health checks before travel, plan destinations in accordance with treatments and self-protective behaviours; accessibility of medications, including authority medications; the reluctance of some doctors to prescribe to a stranger, thus limiting ability to self-care and diminishing autonomy; travel fewer kilometres and fewer destinations as health and strength decline	General health and well-being improves; more meaningful lifestyle; stiff arthritic joints, cancer, major heart problems, physical losses associated with aging	Better policy resourcing and infrastructure to improve provision of healthcare services in rural and remote Australia is needed
Brayley and Obst (2010)	631 participants aged 50–80+ years	440 males, 139 females, 52 sex not reported; 73.4% from Queensland; most were couples	Not reported	Not reported	Not reported	Not reported
Patterson *et al.* (2011)	4 heterosexual couples aged >50 years	Couples A and B were retired from private business; Couple C was a retired foundry manager and laboratory technician; Couple D was a retired accountant and a homemaker	7 weeks	What medications to take for medical care and emergencies; access to medical care while on the road are outlined; before departure decisions, but no findings reported	Not reported	The study results suggest that important social connections with family and new-found friendships were strengthened; evening 'happy hours' were considered important for socialising and as a means of obtaining information about where to travel next, and what to see and do; participants remained reliant on family support to stay away for an extended period; family members looked after pets, home/garden and personal finances
Hillman (2013)	Nine couples and 2 individuals aged >56 years	All retired, identified as 'grey nomads' and came from somewhere other than Queensland	All respondents >3 months, 15% >1 year, 20% 2 years or indefinitely; for most respondents it was the second or third trip of that kind	Most had contingency plans for unforeseen medical emergencies; biannual check-ups and the agreement of GPs before travelling in-between check-ups; carrying a list of medications, letters from GPs outlining medical history and other relevant information; some travelled with enough prescription medication for the trip duration; staying at destinations close to a hospital	Many responded that their health was a concern; travel regardless of deteriorating health; travel as a potential last life experience; less-stressful lifestyle led to health improvement, with 1 respondent remarking 'that stress is 90% of the illness'	One couple visited a GP close to their travel destination and were on file at the practice; nothing else reported

Halcomb *et al.* (2017)	Mean (±s.d.) age 60.2 ± 10.9 years, 62.3% retired, 52.8% female, 76% reported a travelling companion	149 males, 167 females; 62.3% retired; 28.2% received aged pension, 11.4% received a disability pension; 7.3% were on paid leave from their employment; main accommodation was caravan (67.1%) or motorhome (15.5%)	19.9% travelled >46 weeks in the preceding year	206 (65.2%) of respondents and 179 (74%) travel companions health check with GP before travel; 102 (32.3%) travelled with information prepared by GP; 72 (22.8%) visited an ED, 63 (19.9%) visited another health provider	37.3% of respondents had a BMI >30 kg/m^2; 5.7% and 3.7% of companions smokers; 49.7% and 50.2% of companions consumed 1–3 standard drinks per day; 27.2% and 34.8% consumed alcohol 6–7 days per week; 40.2% had hypertension, 22.8% had arthritis, 17.1% had other health conditions, 13.0% had diabetes; 11.1% ceased work because of illness or disability; 42.7% reported long-term illness affecting their everyday life; 8.9% returned from travels because of poor health	Not reported
Calma *et al.* (2018)	Selection criteria >60 years; $n = 8$ aged 62–69 years	Selection criteria ≥1 chronic illness; all had 2–5 diagnoses; 4 females, 4 males	All >3 months in past year	Travel experience improved self-awareness about limitations and boundaries; several travelling with information from GP about their condition	Challenges of, for example, insulin storage when travelling; developed self-management skills in recognition of exacerbations and deterioration and acting accordingly; use of health app to measure BP and heart rate; positive impact travel has on health	Some participants had difficulty accessing health services in rural and remote areas; inability to see a GP meant attendance at ED; lack of shared medical information; limited pharmaceutical stock in some pharmacies
Stephens *et al.* (2018)	Not reported	14 self-identified grey nomads with diagnosis of cancer	4 months–15 years	Integration into travel of organisation and management of cancer treatment and follow-up; travel routes taken in accordance with health needs, supplies and services; took medication and cancer treatment histories	Ongoing oral chemotherapy, acquisition and storage	Not reported

Table 4. Critical appraisal of included publications using the CASP tool
N/A, not applicable

Reference	Aims	Appropriate methodology	Design appropriate to aims	Appropriate recruitment strategy	Data collection	Researcher–participant relationship	Ethical issues	Data analysis	Findings	Research value	Survey tool validity and reliability
White and White (2004)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Cannot tell	Yes	Yes	Adequate	N/A
Onyx and Leonard (2005)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Adequate	N/A
Prideaux and McClymont (2006)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Cannot tell	Yes	Yes	Adequate	N/A
Tate *et al.* (2006)	No	Yes	Cannot tell	Yes	Yes	Cannot tell	Cannot tell	Yes	Cannot tell	Adequate	N/A
Onyx and Leonard (2007)	Yes	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Yes	Adequate	N/A
Cridland (2008)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Yes	Yes	Adequate	N/A
Obst *et al.* (2008)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Cannot tell	Cannot tell	Yes	Adequate	Cannot tell
Holloway (2009)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Adequate	N/A
Brayley and Obst (2010)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Yes	Yes	Adequate	N/A
Patterson *et al.* (2011)	Yes	Yes	Yes	Cannot tell	Yes	Cannot tell	Cannot tell	Yes	Yes	Adequate	N/A
Hillman (2013)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Yes	Yes	Adequate	N/A
Halcomb *et al.* (2017)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Yes	Yes	Adequate	Cannot tell
Calma *et al.* (2018)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Yes	Yes	Adequate	N/A
Stephens *et al.* (2018)	Yes	Yes	Yes	Yes	Yes	Cannot tell	Yes	Cannot tell	Yes	Adequate	N/A

made any claim to be representative of this population; sampling strategies achieved, at best, a snapshot from one or more locations and time. Overall, study quality was mixed (Table 4).

Seven research teams travelled themselves: five were peripatetic (White and White 2004; Onyx and Leonard 2005; Cridland 2008; Holloway 2009; Patterson *et al.* 2011) and two stayed at single locations (Tate *et al.* 2006; Hillman 2013). The geographic settings of these studies ranged across much of Australia. Four ethnographic studies were conducted in camping sites, caravan parks, free rest areas and national parks in Western Australia, the Northern Territory and Queensland (Onyx and Leonard 2005; Cridland 2008; Holloway 2009; Patterson *et al.* 2011). One paper-based survey was distributed at recreational vehicle events and rallies, as well as at caravan parks, in six states in addition to being delivered as an electronic survey of the membership of camping and caravan clubs (Brayley and Obst 2010). Other paper-based surveys were distributed at a caravan show in Brisbane (Obst *et al.* 2008) and at caravan parks in Goondiwindi, on the New South Wales–Queensland border (Prideaux and McClymont 2006). Interviews were performed in the Kimberley District of Western Australia (Tate *et al.* 2006) and in multiple caravan parks and camping sites above the Tropic of Capricorn (Cridland 2008). For the online survey and subsequent telephone interviews, participants' locations were unknown (Halcomb *et al.* 2017; Calma *et al.* 2018; Stephens *et al.* 2018).

Ten of the 14 publications were published between 2004 and 2011, and focused primarily on defining and describing grey nomads, their motivations, the logistics of a travelling lifestyle, the meanings derived from their experiences, their sense of social identity and community and their experience of road safety (Onyx and Leonard 2005, 2007; Prideaux and McClymont 2006; Tate *et al.* 2006; Cridland 2008; Holloway 2009; Brayley and Obst 2010). Health status was part of the description of the participants. The more recent cluster of papers (Hillman 2013; Halcomb *et al.* 2017; Calma *et al.* 2018; Stephens *et al.* 2018) shifted the focus to people who travel with chronic illness and how they manage their health on the road.

Question 1: characteristics of grey nomads

The first question this study addressed was about the characteristics of older people who travel Australia for extended

periods. Responses in the 14 papers came from a total of 3273 participants.

Age and gender

Eight studies set participant age as a recruitment criterion (Onyx and Leonard 2005, 2007; Tate *et al.* 2006; Cridland 2008; Obst *et al.* 2008; Holloway 2009; Brayley and Obst 2010; Calma *et al.* 2018) and subsequently identified grey nomads as people >50 years of age. In one thesis, the target population was aged ≥55 years, collated in three categories: 'young' (55–65 years), 'intermediate' (65–70 years) and 'older' (≥70 years; Holloway 2009). In the other thesis, a minimum age of 50 years was set; however, 15 females and two males were younger (Cridland 2008).

Other studies simply reported the ages of their participants. One study reported all participants as being ≥56 years of age (Hillman 2013). Prideaux and McClymont (2006) found that most participants (89%) were in the 45- to 74-year age group. A more recent study included travellers who were younger or travelling with a family in addition to grey nomads and referred to the whole group as 'domestic self-drive travellers'. These participants ranged in age from 26 to 89 years, with a mean age of 60.2 years for travellers and 59.8 years for their travel companions (Halcomb *et al.* 2017).

Onyx and Leonard (2005) recruited 215 male and 203 female participants, Prideaux and McClymont (2006) identified 92 male (62.2%) and 56 female (37.8%) participants and Halcomb *et al.* (2017) reported that 52.8% of their participants were women. Brayley and Obst (2010) found that of their 631 participants, 440 were male and 139 were female, with 52 not reporting their gender. No other study identified participants by gender.

Of the 3273 participants in these 14 papers and 11 studies over 14 years, only two solo women were identified (Onyx and Leonard 2005; Holloway 2009). None of the 14 publications identified or outlined any specific information or findings on women, whether travelling alone, with other women or without men.

Relationship profile and social identity

Darley *et al.* (2017) found that although most travellers aged ≥55 years travelled as couples, whether any were same-sex relationships was not stated. Cridland (2008) found most grey nomads were heterosexual couples (95%), with 5% de facto couples, 3% singles and <2% same-sex couples. Most single men travelled independently, whereas single women travelled in small parties of two or more vehicles with other singles or couples. Onyx and Leonard (2007) found that most participants travelled as couples. According to Brayley and Obst (2010), older recreational road travellers considered 'couple' as their primary social identifier, with other social group identity, such as grey nomads, as secondary.

Not all studies sought or reported details of the participants' relationships, and referred only to 'participants' and 'travel companions' (Tate *et al.* 2006; Hillman 2013; Stephens *et al.* 2018). Several papers reported participants as 'couples' (Onyx and Leonard 2005; Prideaux and McClymont 2006; Cridland 2008; Holloway 2009; Brayley and Obst 2010; Patterson *et al.* 2011). In other studies where participants also primarily travelled in couples, almost all were heterosexual couples (Onyx and Leonard 2005; Prideaux and McClymont 2006; Cridland 2008), where the males were employed in trade or management positions and the females were housewives or employed in clerical duties (Cridland 2008).

Socioeconomic considerations and ethnicity

Halcomb *et al.* (2017) reported travellers with widely ranging ages (26–89 years), but most (62.3%) were retired; 28% received the aged pension, 11.4% received the disability pension and 7.3% were employed but on paid leave. Distinctions were noted by Cridland (2008), with marked differences between camping grey nomads and those staying in caravan parks. These reflected differences in trip expenditure, retirement income, health and length of retirement. Preferences were also expressed for camping grounds or caravan parks based on the type of vehicle driven, whether pet-friendly caravan parks were needed or available and the types of activities at the destinations.

Onyx and Leonard (2005) found that 83% of participants were Anglo-Australian, 12% were Australians born in the UK and 3% were from Northern Europe, with all having lived most of their working lives in Australia. Few were of another ethnicity, although Cridland (2008) identified a small number of participants from New Zealand. Obst *et al.* (2008) reported that 80% of participants were born in Australia, with 7% born in the UK, 5% born in New Zealand and the remainder being from Africa, Europe and the US. The remaining papers did not mention ethnic origin; neither Aboriginal status nor country of birth was recorded in any paper.

Mode and motivation to travel

The definition of 'grey nomad' included travel for prolonged periods of time, ranging from at least months to longer. In the papers included in this study, participants were described as travelling with self-sufficient accommodation, including caravans (74%), motorhomes (7%), camper trailers, campervans and other arrangements (19%); 66% had four-wheel drive vehicles (Onyx and Leonard 2005). Holloway (2009) described the caravan or motorhome as an extension of the family home, where grey nomads continued their everyday home activities on a smaller scale. Cridland (2008) reported grey nomads travelling on average 126 days (median 115 days); 14.8% travelled <60 days, 19% travelled for 61–89 days, <16% travelled for 131–179 days and 14.3% travelled for >180 days. More than one-third (36%) were away from their usual place of residence for 90–130 days per trip. For participants of an online survey (Halcomb *et al.* 2017), the average trip duration was 24.6 weeks; 19.9% had travelled for more than 46 weeks in the preceding year and 53.3% planned to travel 10 months or more, including indefinitely.

According to Cridland (2008), over 42% of participants travelled to northern Australia during winter to escape the cold; for many grey nomads this was described as a 'must do' (Hillman 2013). Cridland (2008) also said that 22% wanted to see Australia, its historical sites and landscapes, 10% wanted adventure and to get away and others desired a sense of freedom. Patterson *et al.* (2011) found that many wanted to see more of Australia while young and healthy enough to enjoy travelling with friends, exploring new places and meeting new people. Onyx and Leonard (2005) found a consistent pattern of motivation to travel for adventure: to discover places never seen before, to enjoy the

beauty and wonder of the scenery, to be independent, to have the freedom of time that is not duty-bound, to have a less-organised, more-relaxed life, moving slowly, noticing, appreciating and learning, heightening their senses and expanding their understanding and appreciation of the country as a whole.

Taking a different approach, White and White (2004) discussed 'endings' as a motivation to travel: changed family circumstances, such as children leaving home, the death of a partner, anticipation of the end of good health and work changes. They focused on travel as a transitional experience between one thing and another, and its effect on personal identity. Regardless of their motivation and age, participants considered travel a rite of passage.

Social networks, connection and sense of community

One of the most positive aspects of travelling was the experience of meeting other people on the road, some of whom remained lifelong friends (Onyx and Leonard 2005). Grey nomads are part of a larger age-related cohort of people who have retired from the workforce; social interaction among them is pronounced because retirement has separated them from work-related interactions and social connections (Holloway 2009). New social networks developed with new-found friends who were fellow travellers (Patterson *et al.* 2011). Alongside this, travel was also seen in terms of extension of domesticity, with everyday home activities conducted on a smaller scale (Holloway 2009). In addition, Halcomb *et al.* (2017) reported that most travellers used a mobile telephone, email or social media to maintain contact with family and friends at home.

Question 2: pretravel health-related planning and preparation

Travellers recounted a range of planning before departure in relation to their social and health care needs. Tate *et al.* (2006) found that 9% carried health summaries from their GPs. Eleven years later, 23.7% carried a list of medications, which was either self-prepared (44%) or came from a doctor (42.7%; Halcomb *et al.* 2017). This latter study focused on the health needs of those with chronic illness, their health preparedness and well-being while travelling, whereas an offshoot study focused on people with a diagnosis of cancer, reporting that they travelled regardless and because of their diagnosis (Stephens *et al.* 2018). The participants in the study of Calma *et al.* (2018), all aged >60 years and with at least one chronic disease, described a high level of awareness of their health needs, limitations and health management strategies, with expertise developing through their travel experience.

Brayley and Obst (2010) explored how health status may impact road safety, such as a deterioration in visual acuity and a slowing of cognitive processing as part of the aging process. They made the point that grey nomads' experience of road travel can be considerably different to that generally experienced by older drivers. Many grey nomads embark on extended road trips, driving and towing heavy vehicles in rural and remote areas. They may have limited experience or training relevant to the conditions in those areas, such as driving on dirt or narrow bitumen roads, safely negotiating road trains, dealing with wildlife on the road and strong cross-winds while towing. There is also the potential impact of fatigue due to driving long distances. The combination of unfamiliar environmental hazards and stressors alongside health-related aging effects may result in additional health and road safety risks and incidents with undesirable outcomes.

Question 3: grey nomads' experiences in relation to their health and health care provision

Many of the participants had one or more age-related or chronic illnesses. Tate *et al.* (2006) found that 55% of travellers had chronic disease and 61.9% took regular medication. Halcomb *et al.* (2017) reported 40.2% of long-term travellers had hypertension, 22.8% had arthritis, 13% had diabetes and 17.1% had other health conditions. Of these, 11.1% had ceased work due to illness or disability, and 42.7% reported that their illness affected their daily life. Almost one-quarter (23.7%) required ongoing prescription medication. However, the health of these grey nomads was not dissimilar to that reported by this age group in the Australian community generally (Australian Bureau of Statistics (ABS) 2013).

Onyx and Leonard (2007) considered the health of grey nomads in relation to the dominant decline model of aging as opposed to what many participants wanted: adventure, freedom, learning and positive aging. These authors proposed that grey nomads were illustrating a 'Ulyssean' model of aging that entails the exploration of new ideas, activities and learning, as well as intellectual, psychological and emotional growth. This theme was picked up by others (Cridland 2008; Holloway 2009; Hillman 2013), who reported grey nomads with similar expressions of improving health and greater well-being when travelling. Participants reported their health improved as a consequence of living the grey nomad lifestyle, which they explained as resulting from no responsibility, therefore no stress and better health. Over 80% of grey nomads reported good to excellent health (Onyx and Leonard 2007).

A minority of participants experienced acute events. Obst *et al.* (2008) found that 5% had a medical emergency while travelling, such as falls (three had resulted in broken arms and one in a damaged knee). Another medical emergency in a remote area related to painful kidney stones, requiring a 1-h trip to reach help. A further 14% had experienced a health scare including severe chest pains, back injuries, deep vein thrombosis, severe arthritis, cervical cancer diagnosis, pneumonia and fainting. Onyx and Leonard (2007) reported that 32% of men and 21% of women had experienced a major health scare in the previous 2 years and had been treated locally at regional hospitals or by GPs.

One study set in a very remote area of the Kimberley Ranges proposed that grey nomads could be an impost on local healthcare services (Tate *et al.* 2006); this was the only study to recruit healthcare professionals. Another study flagged this same point as an implication of the study findings (Calma *et al.* 2018). Despite studies reporting improvements in participants' health as they lived a nomadic lifestyle (Cridland 2008; Holloway 2009; Hillman 2013), there were reports of health service need and usage. Of online survey participants, 24% had sought medical attention to obtain a prescription, 57% reported having prescriptions filled during their travel and 8.9% had returned home from their travels due to poor health (Halcomb *et al.* 2017).

Calma *et al.* (2018) reported the difficulties experienced by grey nomads in relation to accessing health services and medication and achieving continuity of care while travelling. Calma *et al.* (2018) and Stephens *et al.* (2018) conducted telephone interviews with eight and 14 participants with chronic disease and cancer respectively, and reported how these participants became experts in managing their health while travelling.

Discussion

Onyx and Leonard (2005) referred to the emergence of grey nomads in Australia as a phenomenon: a remarkable occurrence. Grey nomads became a topic of interest because of the aging population (ABS 2019) and the increasing number of retired people with the time and resources to travel the country (Holloway 2009). Australian grey nomads are a unique peripatetic group, many motivated by the desire for travel, adventure and freedom and actively avoiding structured activity. This contrasts North American 'snowbirds' and 'sunseekers', who travel to one destination where there are in-park recreational facilities and where they stay for prolonged periods (Onyx and Leonard 2005; Prideaux and McClymont 2006; Halcomb *et al.* 2017).

The grey nomad literature originates from a diverse range of academic fields: social sciences, media studies, psychology, marketing tourism and business, environmental science and health. Consequently, the reported perspectives on the grey nomad experience are broad, including identity, purpose, social capital, well-being and healthy aging, as well as health and illness management, translating and transcending daily living into a peripatetic lifestyle.

The studies included in this review fell primarily into two groups. Publications before 2011 were mainly concerned with a broad description of travelling people. While predominantly recruiting relatively smaller samples, these early studies focused on identifying the travelling population (White and White 2004; Onyx and Leonard 2005, 2007; Prideaux and McClymont 2006; Tate *et al.* 2006; Cridland 2008; Obst *et al.* 2008; Holloway 2009). Although small scale, these were the first studies from this population and they examined why grey nomads travelled. After 2011, health emerged as a specific consideration, from health and illness as social characteristics as part of healthy aging to a more medical view of people living with chronic disease and how they manage this while travelling (Halcomb *et al.* 2017; Calma *et al.* 2018; Stephens *et al.* 2018). Included studies were published in health or aging-related journals and were anticipated to inform the social trends of an aging population and early retirement (Onyx and Leonard 2007).

A defining characteristic of these participant groups was that they were predominantly older (i.e. >50 years). Other age groups were little described, and often excluded. Even in the most recent large survey, which focused on health (Halcomb *et al.* 2017) and did not apply age criteria, only 15.1% of recruited participants were aged <50 years. Although papers did not consistently report participants' demographic characteristics and recruitment criteria were not always clearly articulated, this population is clearly predominantly older in age. An important theme emerging from this literature is that of aging as a continuance of choice, activity and pursuit of interests. This contributes to the growing literature that challenges the stereotype of older people as increasingly inactive and passive with necessarily deteriorating health (Aronson 2020). Participants also talked of making new and often enduring friendships on the road. The social networks they established contrast with the picture of loneliness and isolation conventionally expected for this age group (von Soest *et al.* 2020). The travelling population clearly described their lives as active and engaged, further supporting the claim made by Onyx and Leonard (2007) that they are 'rewriting the script of aging', to continuing personal growth and social engagement rather than retreat and decline.

Despite the increasing proportion of women in the older population (ABS 2019), relatively few women are evident in this literature. Of the 3273 participants in the included studies, only 644 were identified as female (not all studies reported gender). Almost all women were travelling in heterosexual relationships (Onyx and Leonard 2005; Prideaux and McClymont 2006; Halcomb *et al.* 2017). Across all 14 publications, only two solo women were identified (Onyx and Leonard 2005; Holloway 2009). However, social media platforms, including Facebook, indicate many women are currently travelling Australia. At least eight Facebook closed groups are exclusively for women travelling domestically in self-contained vehicles, sharing their experiences and destinations with photographs and discussions.

Health and health planning

Ten of the 14 included publications reported on the travellers' health and their health planning. Most studies identified the elements of planning as having health checks before trips, carrying letters from their GP regarding their health status and needs, lists of current medications and a sufficient supply of prescriptions, medication and the necessary storage requirements (Tate *et al.* 2006; Cridland 2008; Holloway 2009; Hillman 2013; Calma *et al.* 2018). Some travellers planned their travel route to be at specific destinations to access relevant health care or stayed at destinations close to healthcare services (Cridland 2008; Hillman 2013; Stephens *et al.* 2018). Two studies whose participants were chosen because they were either living with chronic conditions (Calma *et al.* 2018) or were cancer survivors (Stephens *et al.* 2018) discussed, in detail, their planning and organisation for self-management of their condition while travelling. This contrasts the relatively less-prepared picture of the broader population sample from Fitzroy Crossing some 12 years earlier (Tate *et al.* 2006). Some had a plan for potential medical emergencies including communication devices such as UHF or CB radios, and notifying local homesteads on the route of more risky adventures (Onyx and Leonard 2005; Hillman 2013; Halcomb *et al.* 2017).

Most grey nomads have their care planned by healthcare professionals in metropolitan Australia, raising implications for both the education of urban healthcare providers on rural service availability and the integration of care delivery between metropolitan, regional, rural and remote areas. Health care that is planned in metropolitan areas may not be available in non-metropolitan locations. The care planned for travellers must be suitable for delivery at their various destinations (e.g. the availability of medications). The educational needs of both travellers and their healthcare providers as they relate to care planning for prolonged domestic travel should be clarified.

Only one study included health practitioners' views, reporting that travellers should carry and make available to clinicians information such as healthcare summaries, allergies, previous medical history and lists of active problems and medications, radiology and pathology results and hospital admissions (Tate *et al.* 2006). Tate *et al.* (2006) discuss grey nomads in terms of the burden they place on remote health infrastructure but without quantifying what this may entail. Clearly, the capacity of regional, rural and remote services to meet travellers' needs warrants review. Many but not all participants prepared for their trips in relation to their health by addressing items of the healthcare practitioners' wish list. A universal electronic medical record was suggested to address the availability of health information; this has yet to be fully achieved in Australia. Halcomb *et al.* (2017) and Calma *et al.* (2018) refer to the introduction of the voluntary national electronic health record system My Heath Record, but also acknowledge its limitations in terms of uptake, incomplete and potentially out-of-date data. These authors also suggest telehealth and telephone help lines as ways to enhance healthcare access for travellers. As long ago as 2009, Holloway (2009) recommended better policy resourcing and infrastructure to improve healthcare services in rural and remote Australia. It is not clear from this literature what improvements have occurred beyond the introduction of My Health Record as the limited health infrastructure in regional rural and remote Australia remains an issue (Australian Institute of Health and Welfare (AIHW) 2019). Tate *et al.* (2006), Holloway (2009) and, more recently, Raven (2016), Halcomb *et al.* (2017), Calma *et al.* (2018) and Stephens *et al.* (2018) all recognise and flag the topic as a priority for policy review and further research.

Health and healthcare experiences

Some participants accessed healthcare services without difficulty (Onyx and Leonard 2005; Obst *et al.* 2008; Hillman 2013; Calma *et al.* 2018). A few reported a lack of shared medical information and limited access to prescription medications at some pharmacies (Calma *et al.* 2018). Although most reported improved health, a small number terminated their trip because of health problems (Halcomb *et al.* 2017). The number of people visiting regional, rural and remote areas makes it imperative to better understand these travellers, particularly those on the road for longer periods and further from their home services. The implications of this travelling population for the provision of health services, policy, health infrastructure, education and workforce planning in rural and remote communities can only be surmised and research is urgently needed.

Limitations

The search strategy used 'grey nomad', 'traveller' and related terms, including their mode of travel, but may have missed literature if none of these specific words was used. The search was run on five health-related databases and Google Scholar, but searching reference lists identified some further studies, including some published in travel and tourism journals not indexed in health databases. These papers solely reported demographic characteristics of travellers but were excluded because it was not possible to differentiate holidaymakers from longer-term travellers. Nonetheless, it is possible that material may have been missed from tourism-related databases.

Conclusion

This review found only a small body of relevant literature, predominantly qualitative studies. Table 4 demonstrates the mixed quality of reporting in which the trustworthiness of the work was seldom addressed. It demonstrates how little is known about grey nomads, especially women travellers, and the health and other needs of this population.

In summary, research about grey nomads in the early 2000s explored their characteristics and experiences, including their health status and motivations to travel. Identified as primarily older and almost exclusively heterosexual couples, their patterns of chronic illnesses were similar to the age-matched general population, but their health was reported as improved by the less-stressful lifestyle. After 2011, fewer studies were published and the emphasis changed from the broader experience of grey nomads' lifestyle to travellers managing chronic illness. The older person demographic (i.e. those >50 years) remained predominant. No state or national statistics are available for grey nomad populations.

Where this was raised, a few studies reported participants' minimal use of healthcare services while travelling. Although the sole study to recruit healthcare practitioners, at a single remote site, argued that grey nomads adversely impacted local healthcare services, no detail was provided. This gap poses a substantial challenge for health policy and service development, as well as health resource allocation to non-metropolitan Australia. The significant number of people visiting regional, rural and remote areas makes it imperative to better understand these travellers, particularly those on the road for longer periods and further from their home services. The implications for policy and strategy, infrastructure and workforce planning and education and training for healthcare services in rural and remote communities can only be surmised, although the need for better policy and infrastructure to improve the provision of healthcare services has been argued. Discussion has been ongoing for many years, particularly in the community, about the limited health infrastructure in regional, rural and remote Australia (AIHW 2019). The information deficits revealed by the paucity of material available for inclusion in this review only serve to highlight this issue further, and research is desperately needed.

Conflicts of interest

The authors declare no conflicts of interest.

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