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WOMEN'S UNDERSTANDING AND EXPERIENCES OF MENOPAUSE IN LOW- AND MIDDLE-INCOME COUNTRIES IN THE ASIA PACIFIC REGION: A SCOPING REVIEW PROTOCOL

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3 **WOMEN'S UNDERSTANDING AND EXPERIENCES OF MENOPAUSE IN LOW- AND**
4 **MIDDLE-INCOME COUNTRIES IN THE ASIA PACIFIC REGION: A SCOPING REVIEW**
5 **PROTOCOL**
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ABSTRACT

Introduction

Menopause denotes the end of a woman's reproductive life. A woman's understanding and experiences of menopause are shaped by her individual circumstances and may vary between different social and cultural contexts. Evidence is needed to inform research and program delivery that supports women's health and wellbeing throughout the menopausal transition. This scoping review will map existing evidence of women's experiences of menopause in Asia Pacific countries, where limited research exists.

Methods and analysis

For this scoping review we will follow the five-stage framework of Arksey and O'Malley, further developed by Levac *et al* and the Joanna Briggs Institute. Medline, CINAHL, PsycINFO and Scopus databases will be systematically searched using a combination of subject headings and keywords. The title-abstracts and full-text of retrieved studies will be assessed against eligibility criteria. Citation searching of selected articles will supplement database searching. Data will be extracted, charted and synthesised and summarised. Findings will be presented in narrative format and implications for research and practice reported.

Ethics and dissemination

Ethical approval is not required for this scoping review as the selected studies will be gathered from peer-reviewed journals and databases. However, ethical approval has been granted from health service and university ethics committees for community consultation. Our findings will be shared in peer-reviewed publications, presented at conferences and disseminated with communities, health workers and researchers.

STRENGTHS AND LIMITATIONS

- To our knowledge, this will be the first scoping review describing women's experiences of menopause in the Asia Pacific.
- A strength of this study will be the collaborative and consultative nature of the research process with community, which will provide insights into women's experiences of menopause at community level.
- Findings from the review will inform recommendations for future research and health service provision.
- Accessibility of publications is reliant on organisational subscriptions.

- The review is limited to studies published in English and excludes book reviews, commentaries, editorials, letters and grey literature.

KEYWORDS

Menopause; Women; Asia Pacific; Low and middle-income countries; women's health; sexual and reproductive health

INTRODUCTION

Women's individual experiences of menopause vary, influenced by geographical, social and cultural factors as well as age at onset and health status.^{1,2} Menopause is the permanent cessation of menstruation after the ovaries cease follicular activity.³ Menopause signals the end of a woman's reproductive life. The natural process of reproductive ageing is anchored by the final menstrual period (FMP), with the menopausal transition stage of perimenopause characterised by menstrual irregularity prior to the FMP. A woman is considered to have reached menopause after 12 consecutive months of amenorrhea. The postmenopausal stage lasts five to eight years after the FMP and continues to the end of a woman's life.⁴

Many studies report on menopause from a biomedical perspective, with most undertaken in Western, high-income countries. In the medicalisation of menopause, symptoms are considered health concerns requiring medical intervention.^{5,6} However menopause can also be viewed as a sociocultural construct, with symptoms considered a part of the ageing process concomitant with psychosocial factors and a woman's life stage circumstances.^{5,7,8} In low-income and lower-to-upper-middle-income countries in Africa,^{9,10} the Middle East,¹¹⁻¹⁵ and South America,¹⁶ studies report experiences of menopause are influenced by social structure, spiritual beliefs, cultural customs and language. While women experienced similar symptoms across this myriad of contexts, some were unprepared for menopause.^{10,17} Women described menopause variably, as a time when youthfulness, beauty, libido, fertility and good health are lost,^{12,15,16} yet also as a time of gain that included cleanliness, no risk of pregnancy or need for contraception, and increased social status.¹⁵

Globally, women are living longer and healthier lives;¹⁸ thus it is important to understand women's experiences of menopause throughout the menopausal transition phase and beyond, to identify implications for women's health and wellbeing and to better inform health services. Reviews related to menopause have focused on: i) symptoms;^{1,19-22} ii) the experiences of groups of women, including Indigenous women,^{23,24} immigrant women,²⁵ working women,²⁶ women living in their country of

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3 origin,²⁷ Asian women living in Asia compared to those living in Western countries;²⁸ or have (iii)
4 presented an international overview.²⁹⁻³¹ No known studies have compiled the literature on women's
5 experiences of menopause from low-income countries (LIC) and middle-income countries (MIC) in
6 the Asia Pacific region.
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11 The Asia Pacific region is vast, with great diversity among countries in climate, terrain, culture,
12 language, history, and population size. Yet Asia Pacific countries share common values including
13 wellbeing founded upon consensus and harmony between individuals, family members and
14 community, following established norms.³² The aim of our scoping review is to identify and map the
15 literature on women's experiences of menopause in these countries to deepen our understanding of
16 this life stage, identify gaps in the literature and to inform future research and health service delivery
17 for women in the Pacific nation of Solomon Islands. Our study team consists of researchers and
18 women community leaders from Solomon Islands and Australia, both countries situated in the Asia
19 Pacific region.
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28 **METHODS AND ANALYSIS**

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30 A scoping review is a useful approach to examine key concepts and identify knowledge gaps in the
31 existing literature.³³ Scoping review methods assist researchers to map evidence across broad areas
32 including regional/country location and economic classification.³⁴ Scoping reviews are an effective
33 tool to determine the nature of evidence that informs research and practice in a discipline area.³⁵ Our
34 scoping review will follow guidelines established by Arksey and O'Malley,³⁶ and further developed
35 by Levac *et al.*³⁷ and the Joanna Briggs Institute.³⁴ Reporting will follow the Preferred Reporting
36 Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews (PRISMA-ScR).³³
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43 **Stage 1: Identifying the research question**

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45 The research question was identified as a result of our research on women's sexual and reproductive
46 health in the Pacific.³⁸⁻⁴⁰ Using an iterative process, our study team identified a broad research
47 question defining the target population, concept and context to guide the focus, scope and intent of the
48 review.^{34,37} In conducting this scoping review, our research question is: What are women's
49 experiences of menopause in LIC and MIC in the Asia Pacific?
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56 **Stage 2: Identifying relevant studies**

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58 The aim of the search is to identify papers reporting on women's experiences of menopause in LIC
59 and MIC settings in the Asia Pacific region. Initial searching of MEDLINE Ovid will be undertaken
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by an Australian researcher (KC) with access to a range of databases to identify papers on the topic of menopause. Subject headings and keywords describing the papers will be used to develop a full search strategy for MEDLINE Ovid, Cumulative Index for Nursing and Allied Health Literature (CINAHL), PsycInfo and Scopus, adapted for each database. The final search strategy will be reviewed by all authors. The search will not be restricted by time to include all relevant literature on the review topic. We will use the JBI population, concept, context framework to guide inclusion criteria (Table 1).

Table 1 Inclusion criteria using PCC framework

Population	Women experiencing at least one of the following stages of reproductive ageing: perimenopause, menopause or post menopause
Concept	Women's individual experiences or perspectives regarding menopause
Context	Low income and middle income countries* in the Asia Pacific region: Afghanistan; American Samoa; Bangladesh; Bhutan; Cambodia; China; Cook Islands; Democratic People's Republic of Korea; Federated States of Micronesia; Fiji; India; Indonesia; Kazakhstan; Kiribati; Kyrgyz Republic; Lao PDR; Malaysia; Maldives; Marshall Islands; Mongolia; Myanmar; Nepal; Niue; Pakistan; Papua New Guinea; Philippines; Pitcairn Islands; Samoa; Solomon Islands; Sri Lanka; Tajikistan; Thailand; Tibet; Timor-Leste; Tokelau; Tonga; Turkmenistan; Tuvalu; Uzbekistan; Vanuatu; Vietnam; Wallis and Futuna.
Study type	Original and peer-reviewed research

*The World Bank classifies countries/economies by measuring gross national income (GNI) per capita, in US dollars: low income economies <US\$1045 or less; lower middle income between US\$1046 and US\$4095; upper middle income economies <US\$4096 and US\$12695.⁴¹

Papers that meet the following criteria will be included for full text screening:

- i. be located in a LIC or MIC in the Asia Pacific region, as defined by the World Bank⁴² and the Pacific Community SPC;⁴³
- ii. be related to women's experiences of menopause;
- iii. have a qualitative research component, the research design most suited to telling lived experiences of individuals;⁴⁴ and
- iv. be published in English in a peer-reviewed journal.

Due to the broad search strategy and anticipated number of retrievals, book reviews, commentaries, editorials, letters, and grey literature will be excluded. However should findings be limited, research reports will be eligible and assessed for quality using the Critical Appraisal Skills Programme (CASP) checklist.⁴⁵ Studies from Asia Pacific countries defined by the World Bank as having a high income

economy, studies on Asia Pacific women living in countries outside the region, and studies on non-Asia Pacific women living in Asia Pacific countries will also be excluded. A summary of inclusion and exclusion criteria is shown in Table 2.

Table 2 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Studies located in a LIC and MIC in the Asia Pacific region	Studies on Asia Pacific women living in countries outside the region
Studies related to women's experiences of menopause	Studies on non-Asia Pacific women living in Asia Pacific countries
Studies with a qualitative research component	Studies from high income Asia Pacific countries
Studies published in English in peer-reviewed journals	Book reviews, commentaries, editorials, letters and grey literature

Stage 3: Study selection

Following the search, all identified citations will be collated and uploaded to EndNote20 bibliographic software (Clarivate, USA). Duplicates will be removed. Identified citations will then be exported to a Microsoft Excel spreadsheet. Two independent reviewers, one from Solomon Islands (RBH) and one from Australia (KC), will screen the title and abstract of citations against inclusion and exclusion criteria. Each study will be assessed as 'yes', 'no' or 'unclear'. The full text of papers assessed as potentially relevant with a 'yes' or 'unclear' will be retrieved and assessed against the inclusion criteria by two or more independent reviewers. Articles not available in full text will be noted. Reference lists of included papers will be screened for additional relevant studies. Disagreements between the reviewers at each stage of the selection process will be resolved through discussion, or with a third reviewer. The results of the search and the study inclusion process will be discussed by all authors from Solomon Islands and Australia, reported in the final scoping review, and presented in a PRISMA-ScR flow diagram.³³

Stage 4: Charting the data

Key bibliographic data including author, year of publication, location, study aims, participants, methodology/methods, and key findings relevant to the research question will be extracted from the selected full text papers and charted in an Excel spreadsheet. Charting will be an iterative activity with

the spreadsheet refined by two or more team members to include additional data that best describes results relevant to the review question.³⁴ Table 3 outlines categories for data extraction.

Table 3. Data extraction categories

- | | |
|----|---|
| a. | Author(s) |
| b. | Publication date |
| c. | Setting |
| d. | Aims |
| e. | Population/participants |
| f. | Methodology/methods |
| g. | Key findings related to the review question |

Stage 5: Collating, summarising and reporting the results

Data from the selected studies will be collated and summarised in tabular format (see Table 2). Scoping reviews aim to map existing evidence regardless of quality, therefore quality assessment will not be undertaken. Guided by the PCC framework, we will present findings as thematic narrative summaries related to the scoping review aim and question. Implications of the review findings for practice and future research will be discussed.

Patient and public involvement

No patient involved.

ETHICS AND DISSEMINATION

This scoping review reflects ethical principles of facilitating research in a Pacific setting, including respect for relationships, cultural protocols and processes,⁴⁶ reciprocity⁴⁷⁻⁴⁹ and a holistic approach.^{50,51} The research team comprises researchers from Solomon Islands, and researchers from Australia who have almost three decades of experience of living and working in the Pacific. Collaboration and community involvement are centred,⁵² with a commitment to the principle of ‘nothing about us without us’.⁵³

Knowledge translation will initially be community-based where findings will be workshopped with women leaders and community members (women and men). This will validate the scoping review

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3 findings and provide additional perspectives and insights. The locally-contextualised findings forming
4 the review will be shared with health workers and researchers in Solomon Islands at local forums,
5 regionally at Pacific sexual and reproductive health forums and internationally at conferences and via
6 a peer-reviewed publication. This approach will be supplemented with a plain language version of the
7 findings in English and Kwaio languages, and through graphic representation using a local
8 metaphor.⁵⁴
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14 This scoping review will identify gaps in the literature and provide a platform for further evidence-
15 based research of women's experiences of menopause in Asia Pacific nations. The broader
16 menopause study will provide local evidence to assist health service planning and delivery for women
17 at all stages of the menopausal transition in Solomon Islands. Ethical approval for the study has been
18 granted by Atoifi Adventist Hospital Ethics Committee, James Cook University Human Research
19 Ethics Committee, and submitted to the Solomon Islands Health Research and Ethics Review Board.
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30 **CONTRIBUTORS**

31 All authors contributed to the manuscript. KC, MRM and RBH conceived the study with support from
32 DE and EF. KC, MRM and RBH developed the study protocol. KC drafted the protocol manuscript,
33 with all authors critically revising for intellectual content. All authors read and approved the final
34 manuscript.
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46 **COMPETING INTERESTS**

47 None declared.
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WOMEN'S UNDERSTANDING AND EXPERIENCES OF MENOPAUSE IN LOW- AND MIDDLE-INCOME COUNTRIES IN THE ASIA PACIFIC REGION: A SCOPING REVIEW PROTOCOL

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3 **WOMEN'S UNDERSTANDING AND EXPERIENCES OF MENOPAUSE IN LOW- AND**
4 **MIDDLE-INCOME COUNTRIES IN THE ASIA PACIFIC REGION: A SCOPING REVIEW**
5 **PROTOCOL**
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ABSTRACT

Introduction

Menopause denotes the end of a woman's reproductive life. A woman's experiences of menopause are shaped by her individual circumstances and may vary between social and cultural contexts. Evidence is needed to inform research and program delivery that supports women's health and wellbeing throughout the menopausal transition. This scoping review will map evidence of women's experiences of menopause in Asia Pacific countries, where limited research exists.

Methods and analysis

We will follow the five-stage framework of Arksey and O'Malley, further developed by Levac *et al* and the Joanna Briggs Institute (JBI). MEDLINE, CINAHL, PsycINFO and Scopus databases will be systematically searched between February-May 2022 using subject headings and keywords. The title-abstract and full-text of retrieved studies will be assessed against eligibility criteria. The review will focus on studies with a qualitative research component. Citation searching of selected articles will supplement database searching. Data will be extracted, charted, synthesised and summarised. Findings will be presented in narrative format and implications for research and practice reported.

Ethics and dissemination

Ethical approval is not required for this scoping review of selected studies from peer-reviewed journals. Ethical approval has been granted from relevant ethics committees for community consultation. Findings will be shared in peer-reviewed publications, presented at conferences and disseminated with communities, health workers and researchers.

STRENGTHS AND LIMITATIONS

- This review will follow the JBI scoping review manual for methodological rigour and reliability.
- Results will be reported following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews (PRISMA-ScR) for rigour and transparency.
- Inclusion of research with qualitative components facilitates deep understanding of women's experiences of menopause.
- The review will be limited to studies published in English.
- Application of findings will be limited to the Solomon Islands context, hence translatability to other Asia Pacific contexts should be taken with care.

KEYWORDS

Menopause; Women; Asia Pacific; Low and middle-income countries; women's health; sexual and reproductive health

INTRODUCTION

Women's individual experiences of menopause vary, influenced by geographical, social and cultural factors as well as age at onset and health status.^{1,2} Menopause is the permanent cessation of menstruation after the ovaries cease follicular activity.³ Menopause signals the end of a woman's reproductive life. The natural process of reproductive ageing is anchored by the final menstrual period (FMP), with the menopausal transition stage of perimenopause characterised by menstrual irregularity prior to the FMP. A woman is considered to have reached menopause after 12 consecutive months of amenorrhea. The postmenopausal stage continues to the end of a woman's life.⁴

Many studies report on menopause from a biomedical perspective, with most undertaken in Western, high-income countries. In the medicalisation of menopause, symptoms are considered health concerns requiring medical intervention.^{5,6} However menopause can also be viewed as a sociocultural construct, with symptoms considered a part of the ageing process concomitant with psychosocial factors and a woman's life stage circumstances.^{5,7,8} In low-income and lower-to-upper-middle-income countries in Africa,^{9,10} the Middle East,¹¹⁻¹⁵ and South America,¹⁶ studies report experiences of menopause are influenced by social structure, spiritual beliefs, cultural customs and language. While women experienced similar symptoms across this myriad of contexts, some were unprepared for menopause.^{10,17} Women described menopause variably, as a time when youthfulness, beauty, libido, fertility and good health are lost,^{12,15,16} yet also as a time of gain that included cleanliness, no risk of pregnancy or need for contraception, and increased social status.¹⁵

Globally, women are living longer and healthier lives;¹⁸ thus it is important to understand women's experiences of menopause throughout the menopausal transition phase and beyond, to identify implications for women's health and wellbeing and to better inform health services. Reviews related to menopause have focused on: i) symptoms;^{1,19-22} ii) the experiences of groups of women, including Indigenous women,^{23,24} immigrant women,²⁵ working women,²⁶ women living in their country of origin,²⁷ Asian women living in Asia compared to those living in Western countries;²⁸ or have (iii) presented an international overview.²⁹⁻³¹ No known studies have compiled the literature on women's experiences of menopause from low-income countries (LIC) and middle-income countries (MIC) in the Asia Pacific region.

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3 Our scoping review aims to identify and map the literature on women's experiences of menopause in
4 LIC and MIC in this region to deepen our understanding of this life stage, identify gaps in the
5 literature and inform research and health service delivery for women in the Pacific nation of Solomon
6 Islands. Qualitative studies, or studies with a qualitative research component, will be included to gain
7 insight into women's lived experiences of menopause. Our study team consists of researchers and
8 women community leaders from Solomon Islands and Australia, both countries situated in the Asia
9 Pacific region.
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17 **METHODS AND ANALYSIS**

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19 A scoping review is a useful approach to examine key concepts and identify knowledge gaps in the
20 existing literature.³² Scoping review methods assist researchers to map evidence across broad areas
21 including regional/country location and economic classification.³³ Scoping reviews are an effective
22 tool to determine the nature of evidence that informs research and practice in a discipline area.³⁴ Our
23 scoping review will follow guidelines established by Arksey and O'Malley,³⁵ and further developed
24 by Levac *et al.*³⁶ and the Joanna Briggs Institute (JBI).³³ Key components of the JBI scoping review
25 guidelines include an outline of the review, inclusion criteria, search strategy, extraction, presenting
26 and summarising the results, and any potential implications of the findings for research and practice.³⁴
27 Reporting will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analysis
28 extension for Scoping Reviews (PRISMA-ScR) seven item checklist: i) title; ii) abstract; iii)
29 introduction; iv) methods; v) results; vi) discussion and vii) funding.³²
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39 **Stage 1: Identifying the research question**

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41 The research question was identified as a result of our research on women's sexual and reproductive
42 health in the Pacific.³⁷⁻³⁹ Using an iterative process, our study team identified a broad research
43 question defining the target population, concept and context to guide the focus, scope and intent of the
44 review.^{33,36} In conducting this scoping review, our research question is: What are women's
45 experiences of menopause in LIC and MIC in the Asia Pacific?
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51 **Stage 2: Identifying relevant studies**

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53 The aim of the search is to identify papers using a qualitative approach that report on women's
54 experiences of menopause in LIC and MIC settings in the Asia Pacific region. Initial searching of
55 MEDLINE will be undertaken by an Australian researcher (KC) with access to a range of databases to
56 identify papers on the topic of menopause. See Appendix 1 for example MEDLINE search strategy.
57 Subject headings and keywords describing the papers will be used to develop a full search strategy for
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MEDLINE, Cumulative Index for Nursing and Allied Health Literature (CINAHL), PsycINFO and Scopus, adapted for each database. The final search strategy will be reviewed by all authors. The search will not be restricted by time to include all relevant literature on the review topic. Searching commences in February 2022 with anticipated completion by May 2022. We will use the JBI population, concept, context (PCC) framework to guide inclusion criteria (Table 1).

Table 1 Inclusion criteria using the JBI PCC framework

Population	Women experiencing at least one of the following stages of reproductive ageing: perimenopause, menopause or post menopause
Concept	Women's individual experiences or perspectives regarding menopause
Context	Low income and middle income countries* in the Asia Pacific region: Afghanistan; American Samoa; Bangladesh; Bhutan; Cambodia; China; Cook Islands; Democratic People's Republic of Korea; Federated States of Micronesia; Fiji; India; Indonesia; Kazakhstan; Kiribati; Kyrgyz Republic; Lao PDR; Malaysia; Maldives; Marshall Islands; Mongolia; Myanmar; Nepal; Niue; Pakistan; Papua New Guinea; Philippines; Pitcairn Islands; Samoa; Solomon Islands; Sri Lanka; Tajikistan; Thailand; Tibet; Timor-Leste; Tokelau; Tonga; Turkmenistan; Tuvalu; Uzbekistan; Vanuatu; Vietnam; Wallis and Futuna.
Study type	Original and peer-reviewed research

*The World Bank classifies countries/economies by measuring gross national income (GNI) per capita, in US dollars: low income economies <US\$1045 or less; lower middle income between US\$1046 and US\$4095; upper middle income economies <US\$4096 and US\$12695.⁴⁰

Papers that meet the following criteria will be included for full text screening:

- i. be located in a LIC or MIC in the Asia Pacific region, as defined by the World Bank⁴¹ and the Pacific Community SPC;⁴²
- ii. be related to women's experiences of menopause;
- iii. have a qualitative research component, the research design most suited to telling lived experiences of individuals;⁴³ and
- iv. be published in English in a peer-reviewed journal.

Due to the broad search strategy and anticipated number of retrievals, book reviews, commentaries, editorials, letters, and grey literature will be excluded. However should findings be limited, research reports will be eligible and assessed for quality using the Critical Appraisal Skills Programme (CASP) checklist.⁴⁴ Studies from Asia Pacific countries defined by the World Bank as having a high income economy, studies on Asia Pacific women living in countries outside the region, and studies on non-

Asia Pacific women living in Asia Pacific countries will also be excluded. A summary of inclusion and exclusion criteria is shown in Table 2.

Table 2 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Studies located in a LIC and MIC in the Asia Pacific region	Studies on Asia Pacific women living in countries outside the region
Studies related to women's experiences of menopause	Studies on non-Asia Pacific women living in Asia Pacific countries
Studies with a qualitative research component	Studies from high income Asia Pacific countries
Studies published in English in peer-reviewed journals	Book reviews, commentaries, editorials, letters and grey literature

Stage 3: Study selection

Following the search, all identified citations will be collated and uploaded to EndNote20 bibliographic software (Clarivate, USA). Duplicates will be removed. Identified citations will then be exported to a Microsoft Excel spreadsheet. Two independent reviewers, one from Solomon Islands (RBH) and one from Australia (KC), will screen the title and abstract of citations against inclusion and exclusion criteria. Each study will be assessed as 'yes', 'no' or 'unclear'. The full text of papers assessed as potentially relevant with a 'yes' or 'unclear' will be retrieved and assessed against the inclusion criteria by two or more independent reviewers. Articles not available in full text will be noted. Reference lists of included papers will be screened for additional relevant studies. Disagreements between the reviewers at each stage of the selection process will be resolved through discussion, or with a third reviewer. The results of the search and the study inclusion process will be discussed by all authors from Solomon Islands and Australia, reported in the final scoping review, and presented in a PRISMA-ScR flow diagram.³²

Stage 4: Charting the data

Key bibliographic data including author, year of publication, location, study aims, participants, methodology/methods, and key findings relevant to the research question will be extracted from the selected full text papers and charted in an Excel spreadsheet. Charting will be an iterative activity with

the spreadsheet refined by two or more team members to include additional data that best describes results relevant to the review question.³³ Table 3 outlines categories for data extraction.

Table 3. Data extraction categories

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|----|---|
| a. | Author(s) |
| b. | Publication date |
| c. | Setting |
| d. | Aims |
| e. | Population/participants |
| f. | Methodology/methods |
| g. | Key findings related to the review question |

Stage 5: Collating, summarising and reporting the results

Data from the selected studies will be collated and summarised in tabular format (see Table 3). Scoping reviews aim to map existing evidence regardless of quality, therefore quality assessment will not be undertaken. Guided by the PCC framework, we will present findings as thematic narrative summaries related to the scoping review aim and question. Implications of the review findings for practice and future research will be discussed.

Patient and public involvement

No patient involved.

ETHICS AND DISSEMINATION

This scoping review reflects ethical principles of facilitating research in a Pacific setting, including respect for relationships, cultural protocols and processes,⁴⁵ reciprocity⁴⁶⁻⁴⁸ and a holistic approach.^{49,50} The research team comprises researchers from Solomon Islands, and researchers from Australia who have almost three decades of experience of living and working in the Pacific. Collaboration and community involvement are centred,⁵¹ with a commitment to the principle of ‘nothing about us without us’.⁵²

Knowledge translation will initially be community-based where findings will be workshopped with women leaders and community members (women and men) in Solomon Islands. This will validate the

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3 scoping review findings in the local context and provide additional perspectives and insights. The
4 locally-contextualised findings forming the review will be shared with health workers and researchers
5 in Solomon Islands at local forums, regionally at Pacific sexual and reproductive health forums and
6 internationally at conferences and via a peer-reviewed publication. This approach will be
7 supplemented with a plain language version of the findings in English and Kwaio languages, and
8 through graphic representation using a local metaphor.⁵³
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14 This scoping review will identify gaps in the literature and provide a platform for further evidence-
15 based research of women's experiences of menopause in Asia Pacific nations. The broader
16 menopause study will provide local evidence to assist health service planning and delivery for women
17 at all stages of the menopausal transition in Solomon Islands. Ethical approval for the study has been
18 granted by Atoifi Adventist Hospital Ethics Committee, James Cook University Human Research
19 Ethics Committee, and submitted to the Solomon Islands Health Research and Ethics Review Board.
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25 **LIMITATIONS**

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28 A limitation of this study is the application of findings in one context. Further investigation of the
29 translatability of findings to other Asia Pacific contexts is needed.
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38 **CONTRIBUTORS**

39 All authors contributed to the manuscript. KC, MRM and RBH conceived the study with support from
40 DE and EF. KC, MRM and RBH developed the study protocol. KC drafted the protocol manuscript,
41 with all authors critically revising for intellectual content. All authors read and approved the final
42 manuscript.
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54 **COMPETING INTERESTS**

55 None declared.
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Appendix 1:

Example MEDLINE search strategy

-
1. Pacific Islands/
 2. Melanesia/
 3. Micronesia/
 4. Polynesia/
 5. Afghanistan/
 6. American Samoa/
 7. Bangladesh/
 8. Bhutan/
 9. Cambodia/
 10. China/
 11. "Democratic People's Republic of Korea"/
 12. Fiji/
 13. India/
 14. Indonesia/
 15. Kazakhstan/
 16. Kyrgyzstan/
 17. Laos/
 18. Malaysia/
 19. Mongolia/
 20. Myanmar/
 21. Nepal/
 22. Pakistan/
 23. Papua New Guinea/
 24. Philippines/
 25. Pitcairn Island/
 26. Samoa/
 27. "Independent State of Samoa"/
 28. Sri Lanka/

- 1
 - 2
 - 3 29. Tajikistan/
 - 4
 - 5 30. Thailand/
 - 6
 - 7 31. Tibet/
 - 8
 - 9 32. Timor-Leste/
 - 10
 - 11 33. Tonga/
 - 12
 - 13 34. Turkmenistan/
 - 14
 - 15 35. Uzbekistan/
 - 16
 - 17 36. Vanuatu/
 - 18
 - 19 37. Vietnam/
 - 20 38. (afghanistan or "american samoa" or bangladesh or bhutan or cambodia or china
 - 21 or "cook islands" or "democratic people's republic of korea" or "north korea" or
 - 22 "federated states of micronesia" or fiji or india or indonesia or kazakhstan or
 - 23 kiribati or "kyrgyz republic" or kyrgyzstan or lao or malaysia or maldives or
 - 24 "marshall islands" or mongolia or myanmar or nepal or niue or pakistan or
 - 25 "papua new guinea" or philippines or "pitcairn island" or samoa or "solomon
 - 26 islands" or "sri lanka" or tajikistan or thailand or tibet or timor-leste or tokelau or
 - 27 tonga or turkmenistan or tuvalu or uzbekistan or vanuatu or vietnam or "wallis
 - 28 and futuna").mp
 - 29
 - 30
 - 31
 - 32
 - 33
 - 34 39. "pacific islands".mp.
 - 35
 - 36 40. (melanesia or micronesia or polynesia).mp
 - 37
 - 38 41. exp Asia/
 - 39
 - 40 42. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or
 - 41 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or
 - 42 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41
 - 43
 - 44 43. exp menopause/
 - 45
 - 46 44. perimenopaus*.mp
 - 47
 - 48 45. postmenopaus*.mp
 - 49
 - 50 46. 43 or 44 or 45
 - 51
 - 52 47. experience*.mp
 - 53
 - 54 48. 42 and 46 and 47
 - 55
 - 56
 - 57
 - 58
 - 59
 - 60
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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

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



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	n/a
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	n/a
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	n/a
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	n/a
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	n/a
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	n/a
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	n/a
Limitations	20	Discuss the limitations of the scoping review process.	8
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	n/a
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	8

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

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

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

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

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

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



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