**Critical Practice**: Improving my area of practice through the critical appraisal of research evidence

**Essay Title:** Effectiveness of Mindfulness-Based Stress Reduction Therapy in reducing stress and improving mood among Elderly Patients Aged 65 Years and Above

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#### Introduction

Psychiatric nurses play a vital role in the healthcare system by providing care and support to individuals with mental health problems as well as promoting mental health needs. Just like any other nursing specialty, the practice of psychiatric nursing is centered around the needs of the client and relies on evidence-based practice (EBR). Evidence-based practice is an approach used to make informed decisions and deliver high-quality care based on the best available evidence. It involves integrating clinical expertise, patient values and preferences, and the most current and relevant research evidence (Li et al., 2019). Hong Kong Authority's strategic plan for 2022-2027 has put considerable effort into addressing challenges and needs associated with an aging population.

My clinical area (psychiatric care) is focused on providing care and support for

X. NYX

Behavioral Therapy (CBT), reminiscence therapy, relation technique, and aromatherapy to help patients experiencing mental health problems such as stress, anxiety, and depression. While these therapies have been found to be effective, I am interested in

improve my area of practice through the critical appraisal of research evidence. The aim of this study is to explore the effectiveness of Mindfulness-Based Stress Reduction Therapy in improving mood and reducing stress in elderly patients. The objective of this critical analysis is to review the literature on MBSR and evaluate the effectiveness of MBSR therapy in reducing stress which leads to improved mood and mental health.

## **Background**

A growing elderly population is associated with a rising occurrence of chronic illnesses such as cancer, heart disease, hypertension, and diabetes, all which contribute to increased stress and depression. The global population is aging rapidly, with those

aged 65 and above surpassing the number of children under five in 2020 (World Health Organization, 2020). Similarly, Hong Kong is also experiencing a growing aging population, with around 17.9% of its population being aged 65 and over in 2018 and projected to double by 2048 (The University of Hong Kong, 2021).

MBSR focuses on promoting present-moment awareness and acceptance, potentially

as an alternative treatment option in over 200 medical centers across the world and constitutes a 2.5-hour/week, 8-weeks course with a 1-day retreat (Niazi & Niazi, 2011).

### **Research Questions**

For my research questions, I will use the PICO and PICo framework to formulate a quantitative and a qualitative research question. The PICO tool, commonly used in quantitative research, focuses on the Population, Intervention, Comparison, and

focused on analyzing human experiences and social and cultural phenomena. PICo, which stands for population, phenomena of interest, and context, is used to guide question development of a qualitative review (Munn et al., 2018). The two questions are as follows:

Q1: What is the impact of mindfulness-based stress reduction therapy on patients' mood in the care of male and female elderly population aged 65 years and older?

The population (P) will be elderly adults aged 65 years and older experiencing low mood, while the intervention (I) will be Mindfulness-Based Stress Reduction Therapy. The comparison framework will be replaced with context (C) because it will be challenging to make a comparison within the limited timeframe. Thus, the context will focus on the care of elderly patients, and the outcome (O) will be an improvement in mood and stress reduction.

# Q2: What are the lived experiences of men and women (65 years and older) receiving Mindfulness-Based Stress Reduction Therapy?

The population (P) are men and women aged between 65 years and older, while the phenomena of interest (I) are the lived experiences of elderly patients who had received MBSR therapy. The context (C) of the study is not limited to a specific geographic its reserved location or cultural background.

#### Literature Search

## **Structure and Approach**

This critical review will have four major phases: The first one is a systematic literature search for current evidence containing information on the effectiveness of MBSR

the quality of the articles. Thirdly, there will be a discussion to compare and contrast the research findings and, finally, a proposed action plan to inform decision-making on the various alternative psychotherapies that can be used when addressing common mental health problems in elderly population.

#### **Databases**

Databases play a crucial role in nursing research by providing access to a wide range of relevant scholarix literature and information. These databases index resources such as books, journals, dissertations, conference papers, and clinical guidelines, among other



retrieve published information (Hong Kong Baptist University, 2023). The two databases were selected because they are commonly used in healthcare research, and they provide access to a large amount of peer-reviewed literature, making it easier to find relevant studies (Eastern Michigan University Library, 2023).

## Systematic literature search strategy and article selection

#### Literature search

A search was conducted through CINAHL and PubMed to identify quantitative and qualitative articles related to the effectiveness of MBSR therapy in improving mental health status of elderly patients and lived experiences of elderly patients receiving MBSR therapy. I searched through the databases using the key terms in Figure 1. The strategy utilized Boolean operators "AND" and "OR" to combine search terms. Boolean



25 articles from CINAHL and PubMed, respectively, while qualitative articles were, 41 articles from CINAHL and two articles from PubMed. Figure 2 and Figure 3 show PRISMA flow charts that were used to select the two articles used for this critical review.

**Figure 1: Boolean Operators** 

	Search Index	Search terms
	Title / Abstract/full	mindfulness-based stress reduction OR
	text	mindfulness OR mbsr OR mindfulness
		intervention OR mindfulness program
AND	title / Abstract/full	elderly or seniors or geriatrics
× ***	text	
AND	Title / Abstract/full	Mood OR stress OR distress OR mental
THE TANK	text	health
-X-76		Additional search terms for Q2: qualitative
1/2 X		study OR lived experiences OR perceptions
W.		OR attitudes OR views OR phenomenology

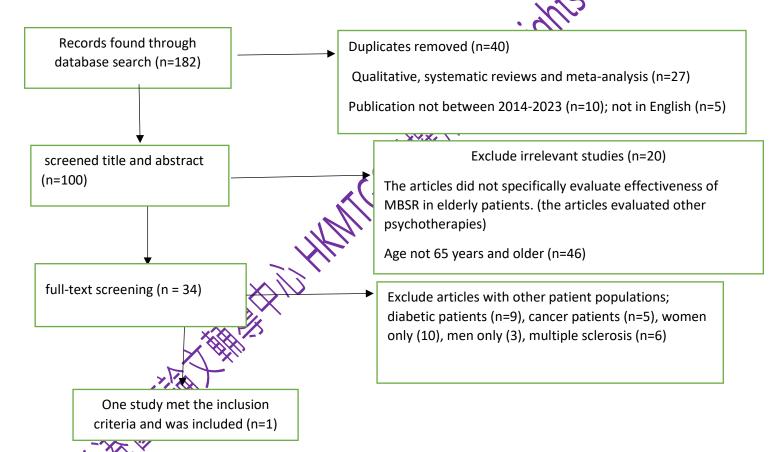
#### Inclusion and exclusion criteria Q1

The inclusion criteria for the selection of articles included studies that evaluated the effectiveness of Mindfulness-Based Stress Reduction (MBSR), specifically in elderly

patients aged 65 years and older. The articles should be published in peer-reviewed journals between 2014-2023 and available in English. The exclusion criteria for this study include

Studies that include patient populations such as diabetic patients, cancer patients, men or women only, or those with multiple sclerosis will also be excluded from this study (see Figure 2).

Figure 2: PRISMA flowchart of study selection Q1



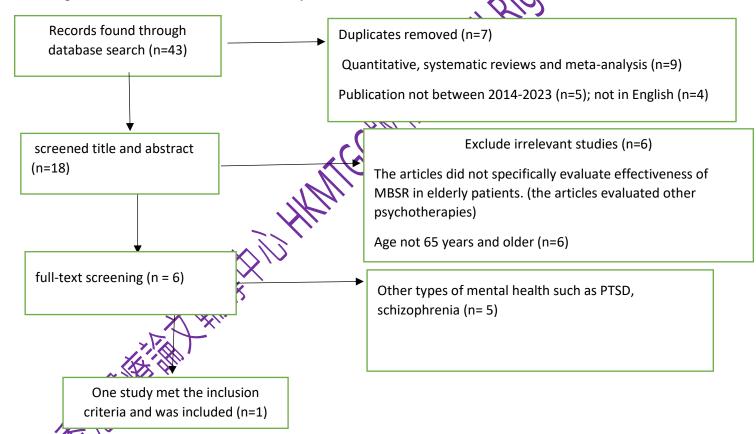
The article selected is titled; Mindfulness-Based Stress Reduction for Older Adults with Stress Disorders and Neurocognitive Difficulties: A Randomized Controlled Trial (Wetherell et al., 2017).

### Inclusion and exclusion criteria Q2

The inclusion criteria include articles that evaluated the effectiveness of MBSR in patients aged 65 years and older. The articles must be published between the years 2014 and 2023 and in English language. The exclusion criteria consisted of articles that focused on other types of psychotherapies, quantitative studies, systematic reviews,

serious mental health conditions such as PTSD and schizophrenia were excluded (see Figure 3).

Figure 3: PRISMA flowchart of study selection Q2



The article selected is titled A qualitative study of older adults' perspectives on initiating exercise and mindfulness practice (Parra et al., 2019).

### **Ethics**

This critical appraisal ensured that all the studies used had full ethical approval. The articles that did not explicitly state ethical approval were excluded from the study. Ethical considerations include ensuring that participants give informed consent,

Human rights principles emphasize the importance of ensuring no harm to the participants, equity, and non-discrimination (Amon et al., 2012). In research involving the elderly population, it is crucial to ensure that all participants are treated fairly and without discrimination based on factors such as age, gender, or socioeconomic status.

## **Critical Appraisal**

**Article 1:** Mindfulness-based stress reduction for older adults with stress disorders and neurocognitive difficulties: a randomized controlled trial by Wetherell et al. (2017)

Critical appraisal is a systematic and rigorous process of evaluating research evidence to determine its reliability, validity, relevance, and usefulness in informing clinical decision-making (Al-Jundi & Sakka, 2018). The CASP randomized controlled trial standard checklist (appendix 1) was used to conduct the critical appraisal for the article



The methodology section was satisfactory, but it had some limitations that may contribute to the risk of bias, such as the lack of blinding and high attrition rates, as reported by the researchers. These limitations should be considered when interpreting the results of the study. The results section is comprehensive, but the absence of a

cost-effectiveness analysis makes it unclear whether the benefits of MBSR outweigh the costs. This limits the sufficiency and dependability of the study findings.

**Article 2:** A qualitative study of older adults' perspectives on initiating exercise and mindfulness practice by Parra et al. (2019).

CASP qualitative checklist was used to appraise the quality of the qualitative study conducted by Parra et al. (2019), which will be used to answer Q2. This tool contains ten questions that are used to appraise the strengths and limitations of qualitative research methods (Long et al., 2020). The qualitative methodology is appropriate for exploring the subjective experiences of the participants (appendix 2). The results of the

sample size (n=41) and used a purposive sampling strategy to recruit participants. The data collection was conducted using semi-structured interviews, and the study reported that ethical issues were addressed appropriately. The data analysis process was transparent and consistent with established qualitative research methods.

# Discussion

**Article 1:** Mindfulness-based stress reduction for older adults with stress disorders and neurocognitive difficulties: a randomized controlled trial by Wetherell et al. (2017)

**Article 2:** A qualitative study of older adults' perspectives on initiating exercise and mindfulness practice by Parra et al. (2019).

In comparing and contrasting my critique of the two papers, I would like to use Lincoln and Gubas framework, which suggests four criteria for developing the trustworthiness

data collection and analysis processes, including member checking and using semistructured interviews to ask open-ended questions so as to collect comprehensive data. Article 1 demonstrated dependability through its use of standardized outcome measures, a detailed protocol for the intervention, and clear inclusion/exclusion criteria for participants making it easier to replicate the findings. The second article demonstrated dependability by providing a detailed description of their recruitment process, data collection procedures, and analysis methods. In terms of confirmability, I can say that Article 1 demonstrated this by blinding the assessors, which helps to minimize bias. Also, article 2 proved the confirmability of the results findings by sharing the raw data and analysis notes. Both studies provided adequate descriptions of their

decisions relating to MBSR as a psychotherapy for older patients to improve mood and reduce stress, anxiety, and depression.

## **Strengths and Weaknesses**

A strength of Article 1 is that it used a randomized controlled trial design which enhances the internal validity of the study and provides strong evidence for the effectiveness of MBSR. Additionally, the use of standardized measures such as well

intervention for 18 months, this shows that the study participants were fully engaged with the intervention hence their ability to describe their detailed experience. Another strength of this qualitative evidence is that the selected participants had been taken through MBSR by well-trained and experienced instructors, which ensured that they received high-quality and standardized interventions. The facilitators of the focus group were not associated with the previous MBSR study from which the participants had been selected, which reduces bias. Taking written notes and video recordings, which were transcribed and checked for accuracy, is a strength of the qualitative study. The written notes and video recordings allow for a more detailed and comprehensive

analysis of the data, as researchers can review and revisit the data multiple times to identify patterns and themes.

A significant weakness I noted from Article 1 was that some outcomes, such as worry, anxiety, and depression, were based on self-reported scales, which may be subject to social desirability bias or other sources of measurement error. The participants were not

the research topic. Also, the study did not have a comparison group of participants which limits the ability to draw conclusions about the unique benefits of MBSR.

## **Proposed Change**

Based on the available evidence, it seems that MBSR can be an effective complementary intervention to reduce stress and improve patients' mood in the psychiatric unit, especially among elderly patients aged 65 years and above. As the

depression. This can potentially provide additional benefits to patients and complement the interventions that we are currently using, such as CBT, reminiscence therapy, relation technique, and aromatherapy.

# Change Idea Evaluation using FAME.

The existing evidence is promising, and it suggests the effectiveness of using MBSR in improving mood and reducing stress among elderly patients. I will evaluate the change idea using the FAME model to assess the level of feasibility, appropriateness, meaning timess, and effectiveness of the practice:

**Feasibility:** MBSR is a relatively low-cost intervention and requires minimal resources in terms of materials or equipment. Basically, The MBSR program contains an 8-week course consisting of a weekly 2.5-hour group session plus a one-day retreat. Participants are taught mindfulness meditation techniques, including body scanning, simple stretches, and postures, as well as awareness of breathing, thoughts, and

emotions. The program also includes discussions and assignments to help participants integrate mindfulness into their daily lives. The goal of the program is to cultivate non-

training staff. Most of the staff in the psychiatric unit are registered nurses, some have an MSN, and there are also APNs hence they have the competency to deliver the intervention.

Appropriateness: MBSR therapy has been studied in a variety of cultural settings,

depression, which is a population that I care for on a daily basis. MBSR therapy can be delivered in various settings and adapted to individual patient needs, making it an intervention that can be integrated into existing care practices in the psychiatric unit (Niazi & Niazi, 2011).

**Meaningfulness:** MBSR has been shown to be effective in reducing stress and improving mood in elderly patients, which is a common issue among patients in our unit. The intervention has the potential to provide additional benefits to our patients. It is a non-pharmacological intervention hence it may be appealing to patients who do not know what to use medication for mental health issues such as stress.

**Effectiveness:** The available evidence suggests that MBSR can be an effective complementary intervention to reduce stress and improve mood among elderly patients in the psychiatric unit. While the number of research I conducted is insufficient to

Therefore, incorporating MBSR as a complementary intervention for patients with stress disorders in the psychiatric unit is a promising approach.

## Legal Implication of the program

The first legal implication will be to ensure that the staffs administering the MBSR are

decline the therapy or choose an alternative form of treatment. We will also ensure that patient's personal and medical information is protected and kept confidential.

#### **Action Plan**

The following is my implementation plan for MBSR intervention in the psychiatric unit using Kotter's theory of change (Lv & Zhang, 2017):

### Short term:

- Create a sense of urgency by highlighting the prevalence of stress among patients.
- Hold meetings to emphasize the potential benefits of incorporating MBSR as a complementary intervention to reduce stress and improve patient mood.
- Form a powerful coalition of leaders by identifying key stakeholders such as the charge nurse, psychiatric nurses, occupational therapists, patients, and their families.

#### Mid-term:

- Share my vision to improve the quality of care provided to patients with stress.
- Address resistance to change by creating more awareness and fighting for resources.
- Program implementation

# Long-term:

- Analyze the effectiveness of the intervention and make improvements based on patient feedback.
- Incorporate MBSR into the standard care plan for patients with stress and low mood.

 Advocate for regular training and educational programs to facilitate the use of MBSR intervention as a part of the care culture.

### Conclusion

This study suggests that mindfulness-based stress reduction therapy has the potential to improve the mental health of individuals aged 65+ years. The findings have the potential to enhance the quality of care in my clinical unit and inform decision-making

questions, conducting effective literature searches, and critically appraising research studies. The knowledge gained will support me in providing evidence-based care and collaborating with colleagues to enhance the quality of care for individuals with mental health problems.

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# Appendix 1



Mindfulness-Based Stress Reduction for Older Adults With Stress Disorders and Neurocognitive Difficulties: A Randomized Controlled Trial (Wetherell et al., 2017)

Section A: Is the basic study design valid for a randomised controlled trial?						
Did the study address a clearly focused research question?  CONSIDER:			Yes •	No	Can't tell	
	Was the study designed to assess the outcome of an intervention? Is the research question 'focused' in terms of: • Population studied	25	the ou	tcome of an int	esigned to assess tervention and it wa CO components.	
	<ul> <li>Intervention given</li> <li>Comparator chosen</li> <li>Outcomes measured?</li> </ul>					
	Was the assignment of participants to interventions randomised? CONSIDER:		Yes 🔽	No	Can't tell	
How was randomisation carried out? Was the method appropriate?     Was randomisation sufficient to eliminate systematic bias?     Was the allocation sequence concealed from investigators and participants?			using	a block sequer	er randomization nce generated by a not part of the study	
	Were all participants who entered the study accounted for at its conclusion?  CONSIDER:		Yes •	No	Can't tell	
<ul> <li>Were losses to follow-up and exclusions after randomisation accounted for?</li> <li>Were participants analysed in the study groups to which they were randomised (intention-to-treat analysis)?</li> <li>Was the study stopped early? If so, what was the reason?</li> </ul>			who d	ropped and all analyzed in the udy was carrie	ed for 1 participant the participants ir respective groups d out for 6 months	
	'N' /'					
	Section B: Was the study met	thod	ologically	sound?		
	Were the participants 'blind' to intervention they were given? Were the investigators 'blind' to the intervention they were giving to participants? Were the people assessing/analysing outcome/s 'blinded'?	Yes		No II	Can't tell	
,	outcome/s 'blinded'?  Were the study groups similar at the start of the randomised controlled trial?	Yes		No	Can't tell	
	the randomised controlled trial? CONSIDER:  Were the baseline characteristics of each study group (e.g. age, sex, socio-economic group) clearly set out?  Were there any differences between the study groups that could affect the outcome/s?	V				
		_				
	nme .					
		Voc		No	Can't tell	
rar	Apart from the experimental intervention, did each study group receive the same level of care (that is, were they treated equally)?					

Section C: What are the results?							
7. Were the effects of intervention reported comprehensively?  CONSIDER:	Yes No Can't tell  □ □ □						
<ul> <li>Was a power calculation undertaken?</li> <li>What outcomes were measured, and were they clearly specified?</li> <li>How were the results expressed? For binary outcomes, were relative and absolute effects reported?</li> <li>Were the results reported for each outcome in each study group at each follow-up interval?</li> <li>Was there any missing or incomplete data?</li> <li>Was there differential drop-out between the study groups that could affect the results?</li> <li>Were potential sources of bias identified?</li> <li>Which statistical tests were used?</li> </ul>	The effects of the intervention was comprehensive but the authors did not undertake a power calculation.						
8. Was the precision of the estimate of the intervention or treatment effect reported?  CONSIDER:  Were confidence intervals (Cls) reported?	Yes No Can't tell						
9. Do the benefits of the experimental intervention outwelgh the harms and costs?  CONSIDER:  What was the size of the intervention or treatment effect?  Were harms or unintended effects reported for each study group?  Was a cost-effectiveness analysis undertaken? (Cost-effectiveness analysis allows a comparison to be made between different interventions used in the care of the same condition or problem.)	Yes No Can't tell  There is no cost-effectiveness analysis, thus it is unclear whether the benefits of MBSR outweigh the costs.						





Section	D:	Will	the	results	help	locall	V

10.	Can the results be applied to your local population/in your context?  CONSIDER:  • Are the study participants similar to the people in your care?  • Would any differences between your population and the study participants alter the outcomes reported in the study?  • Are the outcomes important to your population?  • Are there any outcomes you would have wanted information on that have not been studied or reported?  • Are there any limitations of the study that would affect your decision?	The results of the study to applicable to my local population and will inform my care intervention when caring older patients who depict mental health issues such as worry, depression and anxiety.			
11.	Would the experimental intervention provide greater value to the people in your care than any of the existing interventions?  CONSIDER:  • What resources are needed to introduce this intervention taking into account time, finances, and skills development or training needs?  • Are you able to disinvest resources in one or more existing interventions in order to be able to re-invest in the new intervention?	MBSR may offer unique benefits for patients with stress disorders such as improving their ability to cope with stress and enhancing their cognitive function. However, i don't think it would provide a greater value compared to the current practices but it would be a valuable complementary intervention.			

APPRAISAL SUMMARY: Record key points from your critical appraisal in this box. What is your conclusion about the paper? Would you use it to change your practice or to recommend changes to care/interventions used by your organisation? Could you judiciously implement this intervention without delay?

Based on the findings of the study, I would consider incorporating MBSR as a complementary intervention for patients with stress disorders so as to improve their mood. Nonetheless, further research is needed to confirm the effectiveness of MBSR.

## **Appendix 2**



Paper for appraisal and reference: exercise and mindfe

A qualitative study of older adults' perspectives on initiating exercise and mindfulness practice (Parra et al., 2019)

Section A: Are the results valid? HINT: Consider 1. Was there a clear Yes statement of the aims of what was the goal of the research Can't Tell the research? · why it was thought important • its relevance No Comments: Yes, there was a clear statement of the aims of the research . 2. Is a qualitative HINT: Consider methodology • If the research seeks to interpret or appropriate? Can't Tell illuminate the actions and/or subjective experiences of research participants No • Is qualitative research the right methodology for addressing the research goal

#### Comments:

Yes, a qualitative methodology is appropriate for this study. The research goal is to explore the perspectives of older adults on initiating exercise and mindfulness practice. This requires an in-depth understanding of the subjective experiences and motivations of the participants, which is best achieved through qualitative methods.



### Is it worth continuing?

3. Was the research design appropriate to address the aims of the research? Yes Can't Tell

HINT: Consider

 if the researcher has justified the research design (e.g. have they discussed how they decided which method to use)

#### Comments:

The authors have justified the use of a qualitative research design in exploring the perspectives of older adults on initiating exercise and mindfulness practice.



4. Was the recruitment strategy appropriate to the aims of the research?



- HINT: Consider
- If the researcher has explained how the participants were selected
- If they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study
  - If there are any discussions around recruitment (e.g. why some people chose not to take part)

#### Comments:

Yes, the recruitment strategy is appropriate. A purposive sampling was used and the authors explained their rationale for selection and inclusion and exclusion criteria.

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5. Was the data collected in a way that addressed the research issue?



HINT: Consider

- If the setting for the data collection was justified
- If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)
- If the researcher has justified the methods chosen
- If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews are conducted, or did they use a topic guide)
  - If methods were modified during the study. If so, has the researcher explained how and why
  - If the form of data is clear (e.g. tape recordings, video material, notes etc.)
    - If the researcher has discussed saturation of data

#### Comments:

The data collection method was appropriate for addressing the research issue. There is a detailed description of the data collection method, including how the interviews were conducted and how the data were recorded.



6. Has the relationship between researcher and participants been adequately considered?



HINT: Consider

- If the researcher critically examined their own role, potential bias and influence during (a) formulation of the research questions (b) data collection, including sample recruitment and choice of
- How the researcher responded to events during the study and whether they considered the implications of any changes in the

#### Comments

The relationship between the researchers and the participants was adequately considered. The researchers have critically examined their own role and potential biases which increases the trustworthiness of the results.

#### Section B: What are the results?

7. Have ethical issues been taken into consideration?



- HINT: Consider

  If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical
- standards were maintained

  If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the
  - If approval has been sought from the ethics committee

#### Comments

The study has adequately addressed ethical issues. For instance, the study was approved by the Washington University Institutional Review Board, and written informed consent was obtained from all participants.



8. Was the data analysis sufficiently rigorous?



HINT: Consider

- If there is an in-depth description of the analysis process
- If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data
- Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis
- If sufficient data are presented to support the findings
  - To what extent contradictory data are taken into account
- Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation



#### Comments:

The data analysis is sufficiently rigorous. Te researchers used a thematic analysis approach, which is appropriate for qualitative research.

9. Is there a clear statement of findings?



HINT: Consider whether

- · If the findings are explicit
- If there is adequate discussion of the evidence both for and against the researcher's arguments
- If the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)
- If the findings are discussed in relation to the original research question

#### Comments:

There is a clear statement of findings. The authors explicitly present their key findings in the Results section, with a detailed description of the themes that emerged from their analysis. They also provide direct quotes from the participants to support each theme.

There is also a discussion of the data analysis process which increases to the credibility of the study



#### Section C: Will the results help locally?

10. How valuable is the research?

HINT: Consider

• If the researcher discusses the contribution the study makes to existing knowledge or understanding (e.g. do they consider the findings in relation to current practice or policy, or relevant research-based literature

- If they identify new areas where research is necessary
- If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used

#### Comments: Yes,

The study contributes to a better understanding of how to promote physical and mental well-being among older adults, which is an important public health issue.