PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	'OUT OF SYNC': A QUALITATIVE INVESTIGATION OF PATIENTS' EXPERIENCES OF ATRIAL FIBRILLATION AND PERCEPTIONS OF WEIGHT MANAGEMENT.
AUTHORS	Bates, Rachel; Bailey, Cara; Topping, AE

VERSION 1 – REVIEW

REVIEWER	Woo, Brigitte National University of Singapore, Alice Lee Centre for Nursing Studies
REVIEW RETURNED	18-Jul-2022

GENERAL COMMENTS	Thank you for this piece of work. It was indeed timely and an area that lacked exploration. Congratulations on its completion. I have included my suggestions to improve on this manuscript (as attached – contact publisher for this file). Please consider revising it accordingly. Thank you.

REVIEWER	Rush, Kathy University of British Columbia, School of Nursing
REVIEW RETURNED	22-Jul-2022

GENERAL COMMENTS	The authors are to be commended for delving into this important, yet understudied area in patients with AF. Introduction – makes a case for the importance of weight management in patients with AF with evidence accruing to show its benefits in AF but no qualitative work has been done to obtain patients experiences of being overweight. There was no research question or objective included in the actual body of the manuscript. You state, "No existing qualitative literature explores the experiences of people with overweight and AF, hence this study". Was your purpose to understand the experiences of people with overweight/obesity and AF? Or was it "To explore ways to enhance the design of risk factor management and weight loss services for people with overweight/obesity and atrial fibrillation (AF)" as indicated in your Abstract. Methods are fairly well described but a few more details would enhance replicability. You refer to a Qualitative Interview design. Would you consider that you used a qualitative descriptive (Sandelowski) or interpretive qualitative (Thorne) approach? Nice use of the COM-B model for guiding the interview guide and as a framework for data analysis.

	Your data collection approach to ensure participant comfort and safety in talking about the sensitive topic of overweight is to be commended. It would be helpful to provide rationale for the use of the symptom severity scale and the EQ-5D-5L to guide the interview. Also please include the topic guide you developed based on the COM-B model. Did you ask questions to understand weight management before compared to after their AF diagnosis? What approach did you use for data analysis? It appears you used a hybrid approach involving deductive coding initially using the COM-B model and subsequently did inductive coding to create sub-codes. It would be helpful to expand on your description of your analysis. The following paper may be helpful in this regard: Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. International Journal of Qualitative Methods, 5(1), 80–92. It also appears you did manual coding. After you imported the data into a spreadsheet, how was the coding actually done? It also appears you did not make use of a qualitative software program such as NVivo. Please make that explicit. Research ethics addressed Presentation of Results/Address Research Question You mention that 11 participants reported comorbidities that impacted ADLs and QoL. What was the mean number of co-morbidities they had? What were the more common ones? The three main themes with some apparent subthemes are well presented. What is confusing is the integration of the COM-B Framework in the analysis. The behavior change model is a great fit with the overweight AF patient, but it is hard to see the movement from the COM-B framework to the eventual analysis and how you derived the Figure. The “capability” category from the COM-B is mentioned in relation to the symptoms of being out of rhythm and that is the only time the COM-B is mentioned in the findings although Table 2 shows the COM-B category relative to the themes. The findings could benefit from a bit more integration of the two analytical components (COM-B categories and themes). More contextualization of the findings would have been helpful. Although you indicate the age and sex of the participants there is no indication of whether they were recently diagnosed or had had a long history of AF or whether they self-reported high/low symptom severity, or if they were currently overweight or had been or their experience with weight loss programming, etc and it would seem some of these factors might have had an impact on their perceptions of their weight and weight management. Try to integrate more contextual information when presenting quotes, to draw out the richness of the data and the patient voice. It is also difficult to tease out how much of participants overweight reflected AF specifically or their other comorbidities (we aren’t told what the most common comorbidities were among your participants, or some combination of them). Even though your overall sample was homogenous there was variability and this could be integrated into

	the presentation of findings (reinforcing the comment above) Under the first theme, Pg. 9, lines 49-53 you state: Nine of the twelve participants had been hospitalised with severe symptoms, and eleven had undergone cardioversion or ablation for symptom management. How long ago had patients been hospitalized and/or had had treatments? With patients ranging from 4 months to 15 years since diagnosis this would have varied and the impact of the symptoms on everyday life quite variable among participants. Please provide greater contextualization. Pg. 11, lines 5-7 you state that Four male participants with physically demanding jobs associated being big with being strong. Did this connotation for these 4 male participants reduce their motivation to do anything about their overweight? Were there any other gendered differences in participants responses to being overweight? The gendering of weight might be picked up in your Discussion. Discussion/Conclusion Justify Results It was hard to see based on your findings how study participants had "changed behaviour and demonstrated capacity, opportunity and motivation even though changes were short-lived and not sustained or habituated". It will be important to acknowledge the complexity related You mention in the discussion, pg. 15 a Belgium study and the finding that nearly 70% (n=143) of participants were aware of the benefits of weight reduction for AF management. This seems like a large proportion who were aware in contrast to the typical findings. What might be different in Belgium than elsewhere? Limitations – limitations are addressed related to sample homogeneity, COVID-19 distancing requiring phone use (though provided benefits of using phone in the overweight person with AF. Another limitation is the complexity of overweight particularly in a population with one or more co-morbidities because more co-morbidities might be expected to have a greater impact on weight than fewer co-morbidities. This makes it difficult to single out participants experiences of overweight and weight management relative to AF. Editing issues: Pg. 13, line 45-46 and spelling of calory restriction – calorie not calory Pg. 15, lines 6-10 and the following sentence. Please qualify who you are referring to as having lack of skills and fear: This dissonance between patient preferences and healthcare professionals' interactions may be due to lack of skills when discussing weight management or fear of engendering a negative reaction. Please address the anthropomorphism in this sentence: Better understanding of the lived reality of these factors (factors do not have lived realities but people do) could improve the design of weight management services for this population. You may want to check the term cardiologically – is it an acceptable English language word?

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Brigitte Woo, National University of Singapore

Comments to the Author:
Dear authors,

Thank you for this piece of work. It was indeed timely and an area that lacked exploration. Congratulations on its completion. I have included my suggestions to improve on this manuscript (as attached). Please consider revising it accordingly. Thank you.

Our response: Thank you for your appreciation and valuable suggestions, which were included as an attachment. We have copied them below for ease of scanning

When was data collected? (p1)

Our response: We have added the dates "between September 2020 and January 2021" on p1 and p4

Be more specific and include that they are overweight and not the general AF population (p1)

Our response: We have added "and overweight" (p1). It could be argued that people with AF and over weight _are_ the general AF population – for example in the FANTASIIA registry of AF patients, 88% were in the overweight and obese categories (https://doi.org/10.1161/JAHA.119.013789). However we recognise that clarity is key and have made the change to specify this.

This is also a strength of qualitative research. It is not meant to be generalisable. (p2)

Our response: Thank you for this important observation. This limitation relates to the lack of representativeness of our sample with respect to different cultures and ethnicities rather than the potential generalisability of the study, so we have decided to retain it as is.

Well written and good justification of study (p3)

Our response: Thank you for your appreciation. We are pleased that you found the introduction to be clear.

Please expand to provide more context on why previous studies (and you) decide on BMI 27 and not 25. (p3)

Our response: (We have moved this section to the METHODS in response to comment by ES). The quantitative studies from which this figure was taken do not explain why it was chosen. However, as these trials aimed to study the difference in outcomes between people who did and did not reduce their bodyweight by >10% during the study period, a BMI of 27 would seem to have been chosen because a reduction of 10% would place these participants in the "normal" weight category, while a person with a BMI between 25 and 27 would have to lose less than 10% of their body weight to achieve "normal" weight. When conceiving the present study, we noted that a large proportion of participants in the quantitative studies (up to 60%) did not achieve the weight-loss target. It was logical to interview people who fit the same inclusion criteria. As we are only able to speculate on the reasons why the quantitative papers used a BMI>27 (and with respect to word limit recommendations)

word limit, we have elected not to include this explanation in the text.

Please include a section, "Rigour", to describe measures taken to maintain rigour and ensure trustworthiness of this study. (p4)

Our response: We have added a section "Rigour" in "Methods", (p8). The Analysis section has been expanded to include measures taken to maintain rigour e.g. checking of themes against original transcripts to ensure consistency between the researchers' constructs and participants original statements, (p8).

Do these patients have previous research experience? (p4)

Our response: They do – we have added this (p4)

(Suggested correction to text) “living with AF and being overweight” (p4)

Our response: We have used "with overweight" and "having overweight" throughout this study in accordance with the current convention of referring to people as "having" a medical condition rather than "being" a medical condition. For this reason we have elected not to make this alteration.

First mention of abbreviation. Prefer to have it explained here instead of the next sentence. (p4)

Our response: We have combined these sentences combined to include explanation of abbreviation with first mention of COM-B (p4).

When was data collected? Between which month-year to which month-year? Please state. (p4)

Our response: We have added "between September 2020 and January 2021" (p4)

Did the partners chime in or speak during the interviews? (p6)

Our response: The partners could occasionally be heard commenting in the background, but it was not possible to pick out what they were saying. These instances were noted in the interview transcripts. We have added a note on this on page 7.

Please explain how RB (or CB and AT) were trained to use the "Think-Aloud" technique. How was the quality of the interview data/data collection ensured? Please expand.(p6)

Our response: RB was a masters student supervised by experienced two research nurse academics, CB and AT. CB had extensive previous experience of using the ThinkAloud technique and suggested its use to draw out detail during the questionnaire filling exercise. CB trained RB in the use of ThinkAloud during tutorials. RB has extensive nursing experience both in clinical and research delivery fields. She was supported to develop interview skills by CB during tutorials through discussion and role-play exercises. RB kept journals and reflected after each interview on positive and negative aspects and sought support from CB and AT to continuously develop. Interviews were reviewed by CB and AT and advice and feedback given. We have added brief detail to address this (p7).

Please attach topic guide as appendix/supplementary file as good practice. Thanks. (p6)

Our response: Uploaded as BatesBaileyTopping2022_Appendix2_TopicGuide.pdf

Was the topic guide/interview pilot tested? (p6)

Our response: The topic guide was not pilot tested but was allowed to development as the interviews progressed to follow new lines of enquiry. We have added a comment on this (p7).

Was transcribed verbatim or in brief? Please state. (p6)

Our response: Interviews were transcribed verbatim by RB to facilitate data immersion. We have added this (p7).

It'll be good to refer readers back to Table 1 again. (p9)

Our response: direction added (p10)

If you intend to introduce pseudonyms in the main text, I suggest you add a column on Table 1 with the participants' pseudonyms. (p12)

Our response: This is an error - thank you for drawing it to our attention. Pseudonyms were agreed with the participants and used in the original manuscript (and thesis on which this article is based) but were removed at the request of the BMJOpen editorial team.

Please spell in full (p13)

Our response: We have spelled “did not” out in full as requested

These 2 sentences seem to contradict each other. There's a lack of awareness, yet, in Belgium c.70% were aware of the benefits of weight reduction. So why? Please explain and expand. (p14)

Our response: Thank you for bringing this to our attention. We have added the words "By contrast..." to highlight our awareness that there appears to be a discrepancy in practice/information/advice between the UK and Belgium. The Belgian paper does not describe practice in the three hospitals where the survey was conducted, so any addition to this would be purely speculative and of limited value. We have therefore chosen not to expand but recognise this a possible area for future study.

generalisability will be a better word to use (p15)

Our response: Change made (p17)

Why not video-conferencing? Nonverbal cues could have been captured. (p15)

Our response: This is a very good point, thank you for raising it. Over the past couple of years video conferencing has very quickly become normalised largely due to social distancing precautions. The interviews took place at the very beginning of the COVID-19 pandemic, before video conferencing for work, academic and social purposes became common practice. Most people at the time (including the research team, whose video meetings were regularly interrupted by technological "fails") were still finding the experience of video conferencing relatively stressful. If we were to conduct the study again now that video conferencing is "the new normal", we may well offer it as an option. We acknowledge your point that telephone interviews meant missing non-verbal clues. We believe this disadvantage was counterbalanced by the openness with which we feel participants spoke when freed from concerns about judgement based on physical appearance.

The role of the multidisciplinary team i.e. physician, nurse, dietician, occupational therapist or

physiotherapist is pivotal in the weight management/reduction of patients living with AF. Please explore and include in recommendations. (p15)

Our response: Thank you for making this very important point. Due to word limit considerations, we do not feel we can do justice to a discussion of the role of the MDT in the recommendations section. This could be a focus for future study, as we consider how to take forward our findings from the present study into clinical practice. We have added a brief mention of the MDT to this section.

Reviewer: 2
Dr. Kathy Rush, University of British Columbia

Comments to the Author:
The authors are to be commended for delving into this important, yet understudied area in patients with AF.

Our response: Thank you for your kind commendation and recognition of the need for study of this area.

Introduction – makes a case for the importance of weight management in patients with AF with evidence accruing to show its benefits in AF but no qualitative work has been done to obtain patients experiences of being overweight.

Our response: we are pleased that the introduction appears to be clear.

There was no research question or objective included in the actual body of the manuscript. You state, “No existing qualitative literature explores the experiences of people with overweight and AF, hence this study”. Was your purpose to understand the experiences of people with overweight/obesity and AF? Or was it “To explore ways to enhance the design of risk factor management and weight loss services for people with overweight/obesity and atrial fibrillation (AF)” as indicated in your Abstract.

Our response: Thank you for pointing out this significant oversight on our part. We have added a line "The objective of this study is to identify practical ways to address perceived barriers to weight reduction through better understanding of patients’ experiences and perspectives." (p3)

Methods are fairly well described but a few more details would enhance replicability. You refer to a Qualitative Interview design. Would you consider that you used a qualitative descriptive (Sandelowski) or interpretive qualitative (Thorne) approach?

Our response: Thank you for your advice on improving this section. We consider the approach to be interpretive, as we have sought to investigate a clinical phenomenon (weight neutrality despite evidence of weight loss benefits) by exploring the complex experiences of the patients it affects with relation to their health, perceived social pressure, etc, and to make conceptual linkages using the COM-B model which could be applied in clinical practice. Added reference (p4)

Nice use of the COM-B model for guiding the interview guide and as a framework for data analysis.

Our response: Thank you for your positive comments on our use of the COM-B model. We found its use to be invaluable in bringing focus and coherence to both the interviews and the analysis.

Your data collection approach to ensure participant comfort and safety in talking about the sensitive topic of overweight is to be commended.

Our response: Thank you for your appreciation of the steps we took

It would be helpful to provide rationale for the use of the symptom severity scale and the EQ-5D-5L to guide the interview.

Our response: These questionnaires were chosen as they are very frequently used in AF studies and are well validated. Using the symptom severity scale facilitated participants in focussing on the degree to which AF symptoms affected their day-to-day activities, fitness, and lifestyle choices. The EQ-5D-5L drew out information on other comorbidities. We have added a line to explain the rationale (p7).

Also please include the topic guide you developed based on the COM-B model.

Our response: Uploaded as BatesBaileyTopping2022_AppendixA_TopicGuide.pdf

Did you ask questions to understand weight management before compared to after their AF diagnosis?

Our response: Where participants' responses to the questionnaires suggested their AF symptoms were affecting their activity levels or mood, follow up questions were aimed to explore the reasons for and the effects of this. Differences in weight management before and after diagnosis usually fell into the physical capability (one participant had been doing the Couch-2-5K programme but had abandoned it due to palpitations after diagnosis) and psychological capability which often overlapped with motivation (one participant talked about treating himself to cakes and hot chocolate more often as a comfort while waiting for an AF ablation procedure). We would really like to include more of these details in the findings, but had to make some difficult choices to observe the word count guidelines.

What approach did you use for data analysis? It appears you used a hybrid approach involving deductive coding initially using the COM-B model and subsequently did inductive coding to create sub-codes. It would be helpful to expand on your description of your analysis. The following paper may be helpful in this regard:
Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. International Journal of Qualitative Methods, 5(1), 80–92.

Our response: Thank you for signposting this interesting paper. We used the Eclectic approach described in Saldaña, J. The Coding Manual for Qualitative Researchers. 3rd Ed. Los Angeles 2015: SAGE: 188-193.. We have added further information about the coding process (p8)

It also appears you did manual coding. After you imported the data into a spreadsheet, how was the coding actually done? It also appears you did not make use of a qualitative software program such as NVivo. Please make that explicit.

Our response: Manual coding was carried out using a series of spreadsheets to track the evolving analysis. The decision not to use NVivo was largely due to the COVID pandemic limiting access to the University campus which meant software downloads and updates could not be accessed. Having previously lost files (during the literature review stage) which had become corrupted and being unable to access IT support, the decision was made to use Word Excel for the coding and analysis. We have added a note (p8).

Presentation of Results/Address Research Question
You mention that 11 participants reported comorbidities that impacted ADLs and QoL. What was the mean number of co-morbidities they had? What were the more common ones?

Our response: Thank you for this important question on comorbidities. We have chosen to use this opportunity to draw out difference here by discussing the actual number of comorbidities reported by participants, rather than reporting a mean (the mean was 1.87, which did not seem particularly meaningful). We have also added detail on the most common comorbidities (ischaemic heart disease, type 2 diabetes mellitus, and joint pain) (p10).

The three main themes with some apparent subthemes are well presented. What is confusing is the integration of the COM-B Framework in the analysis. The behavior change model is a great fit with the overweight AF patient, but it is hard to see the movement from the COM-B framework to the eventual analysis and how you derived the Figure. The “capability” category from the COM-B is mentioned in relation to the symptoms of being out of rhythm and that is the only time the COM-B is mentioned in the findings although Table 2 shows the COM-B category relative to the themes. The findings could benefit from a bit more integration of the two analytical components (COM-B categories and themes).

Our response: Thank you for drawing this lack of clarity to our attention. Our attempts at brevity have clearly impacting on clarity in this section. We have added detail to the analysis section which we hope improves the explanation of this process, and clarifies how the figure was derived (p8). We have also referred back to the COM-B model in the Doing the Right Thing and Broaching the Subject themes (p11 and p12) which we hope improves integration of the analytical framework within the findings.

More contextualization of the findings would have been helpful. Although you indicate the age and sex of the participants there is no indication of whether they were recently diagnosed or had had a long history of AF or whether they self-reported high/low symptom severity, or if they were currently overweight or had been or their experience with weight loss programming, etc and it would seem some of these factors might have had an impact on their perceptions of their weight and weight management. Try to integrate more contextual information when presenting quotes, to draw out the richness of the data and the patient voice.

Our response: Thank you for this suggestion on contextualising the findings. We recognise the amount of contextual detail given in the text is limited. This is largely due to word count considerations, and because of this we have included detail on most of the point you raise in Table 1 but we recognise this may be difficult to relate to individual participants’ experiences. We have integrated some additional contextual data when presenting quotes, to try to improve this and add richness.

It is also difficult to tease out how much of participants overweight reflected AF specifically or their other comorbidities (we aren’t told what the most common comorbidities were among your participants, or some combination of them). Even though your overall sample was homogenous there was variability and this could be integrated into the presentation of findings (reinforcing the comment above)

Our response: Thank you for this observation. We recognise that it is desirable to tease out detail and variability however, due to word restrictions, we have had to choose where we can most usefully focus attention. From the point of view of managing this population and tailoring weight management services for them, we did not believe it was productive to quantify the various contributors to participants’ overweight. We chose instead to aim to present this population as having complex needs due to a variety of factors. We have added detail on comorbidities (p10).

Under the first theme, Pg. 9, lines 49-53 you state: Nine of the twelve participants had been hospitalised with severe symptoms, and eleven had undergone cardioversion or ablation for symptom

management. How long ago had patients been hospitalized and/or had had treatments? With patients ranging from 4 months to 15 years since diagnosis this would have varied and the impact of the symptoms on everyday life quite variable among participants. Please provide greater contextualization.

Our response: Hospitalisation was for one night only for relief of symptoms in all cases. Again we recognise the desirability of drawing out detail but have had to choose where to focus attention. These details were included in an attempt to illustrate that, while we suspect there is a tendency among some cardiologists to see AF as a chronic annoyance which needs to be treated to avoid problems of heart failure further down the line, many patients have experienced it as a terrifying acute loss of bodily control. We wished to draw out the difference between the perspectives and perceptions of cardiologists and those of their patients more than the differences between the various participants.

Pg. 11, lines 5-7 you state that Four male participants with physically demanding jobs associated being big with being strong. Did this connotation for these 4 male participants reduce their motivation to do anything about their overweight? Were there any other gendered differences in participants responses to being overweight? The gendering of weight might be picked up in your Discussion.

Our response: Interestingly this was the only example of distinct gendering which was uncovered by our analysis. Class differences were noted, regarding having a body that is capable of physical work. All participants discussed physical appearance and a desire to look slim. Strong gendering was noted in the diagnosis of AF, with women reporting their symptoms repeatedly being dismissed as anxiety whereas men reported immediate action/referral/investigation from their GP on reporting symptoms. This gender difference in diagnosis may form the basis of future research. Due to the word limit, we have not expanded further on gendering of weight in this paper.

Discussion/Conclusion Justify Results

It was hard to see based on your findings how study participants had “changed behaviour and demonstrated capacity, opportunity and motivation even though changes were short-lived and not sustained or habituated”. It will be important to acknowledge the complexity related

Our response: Thank you for highlighting this lack of clarity. We have alter the sentence for clarification: "In this study participants reported having previously lost weight by changing their behaviour, thus demonstrating their capacity, opportunity and motivation to do so. The complexity of sustaining changes is reflected in their subsequent weight regain." (p14)

You mention in the discussion, pg. 15 a Belgium study and the finding that nearly 70% (n=143) of participants were aware of the benefits of weight reduction for AF management. This seems like a large proportion who were aware in contrast to the typical findings. What might be different in Belgium than elsewhere?

Our response: 80% of the Belgian participants responded that they had been told of the link by a physician. It is not clear why physicians in Belgium might be more forthcoming with this information than their UK counterparts - cultural acceptability, training, difference in doctor-patient relationships. We have chosen to note the discrepancy but not to speculate. Reasons for this difference could form the basis of future research.

Limitations – limitations are addressed related to sample homogeneity, COVID-19 distancing requiring phone use (though provided benefits of using phone in the overweight person with AF. Another limitation is the complexity of overweight particularly in a population with one or more co-morbidities because more co-morbidities might be expected to have a greater impact on weight than fewer co-

morbidities. This makes it difficult to single out participants experiences of overweight and weight management relative to AF.

Our response: We note the difficulty of managing weight in a population with multiple comorbidities, but we disagree that this should be included as a limitation as the aim of this paper was not to single out how AF affects weight management, but to illustrate that weight management is a complex issue and that reducing weight management to a simple energy in/energy out equation (as is the temptation with quantitative paper findings) is unlikely to be effective, especially in the AF population who tend to be older and have multiple comorbidities.

Editing issues:

Pg. 13, line 45-46 and spelling of calory restriction – calorie not calory

Our response: Thank you for pointing this out – we have corrected it

Pg. 15, lines 6-10 and the following sentence. Please qualify who you are referring to as having lack of skills and fear: This dissonance between patient preferences and healthcare professionals' interactions may be due to lack of skills when discussing weight management or fear of engendering a negative reaction.
Our response: We have clarified that we are referring to the health care professional.

Please address the anthropomorphism in this sentence: Better understanding of the lived reality of these factors (factors do not have lived realities but people do) could improve the design of weight management services for this population.

Our response: we have amended this phrase to "Better understanding of patients' lived reality of these factors could improve the design of weight management services for this population." (p3)

You may want to check the term cardiologically – is it an acceptable English language word?

Our response: This term is most commonly used in the phrase "cardiologically stable". It is unusual in lay English, but acceptable in meaning "with respect to the heart", so we have retained it.

VERSION 2 – REVIEW

REVIEWER	Woo, Brigitte National University of Singapore, Alice Lee Centre for Nursing Studies
REVIEW RETURNED	30-Aug-2022

GENERAL COMMENTS	Thank you for revising the manuscript. All my concerns were sufficiently addressed.