

Synthesizing qualitative studies exploring gay and bisexual men's experiences of prostate cancer: a case study.

Case Title

Synthesizing qualitative studies exploring gay and bisexual men's experiences of prostate cancer: a case study.

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Nursing (Clinical Research) [D25]

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Contributor Biographies

Aaron Worsley is an academic librarian specializing in healthcare at Oxford Brookes University. Aaron has obtained a Bachelor of Arts at the University of Huddersfield, and a Master of Arts at Aberystwyth University. He has previously worked as a research assistant and a library assistant. His research interests center on masculinity and healthcare issues pertaining to gay men and men-who-have-sex-with-men. Having developed knowledge in literature searching and research support, he has worked with his co-author to publish four

articles about the effects of prostate cancer on men's health and on their masculinity. He is also involved in collaboration with staff at Chitkara University in India to develop and instigate the search strategy for a systematic review.

Dr Obrey Alexis worked in the NHS in different roles for many years. He subsequently became a senior lecturer at Oxford Brookes University for over 14 years and teaches on a number of nursing and research modules. Additionally, Obrey has established the first global health nursing module on the adult nursing programme. Obrey obtained his PhD from the University of Surrey where he examined the experiences of internationally recruited nurses in the NHS. Obrey was a visiting scholar at a number of universities in the USA including New York University, Columbia University, John Hopkins University in Baltimore, and the University of Pennsylvania. Obrey sits on a culture and diversity advisory group to the Chief Nursing Officer for NHS England advising on nursing issues and raising awareness of health inequalities in black and minority ethnic communities. As a researcher, Dr Alexis has published over 40 articles in the field of international nurses, culture and diversity' systematic reviews and latterly on prostate cancer. His other research interests include migrants and black men health, as well as workforce issues. More recently he has been a visiting professor at Chitkara University in India and is collaborating with this university on a systematic review.

Published Articles

Alexis, O. and Worsley, A. J. (2018). The Experiences of Gay and Bisexual Men Post-Prostate Cancer Treatment: A Meta-Synthesis of Qualitative Studies. *American Journal of Men's Health*, 12(6), 2076-2088.

Alexis, O. and Worsley, A. J. (2018). A Meta-Synthesis of Qualitative Studies Exploring Men's Sense of Masculinity Post-Prostate Cancer Treatment. *Cancer Nursing*, 41(4), 298-310.

Alexis, O. and Worsley, A. J. (2018). An integrative review exploring black men of African and Caribbean backgrounds, their fears of prostate cancer and their attitudes towards screening. *Health Education Research*, 33(2), 155-166.

Ahiagba, P., Alexis, O. and Worsley, A. J. (2017). Factors influencing black men and their partners' knowledge of prostate cancer screening: a literature review. *British Journal of Nursing*, 26(18), S14-S21.

Abstract

Literature reviews are ideal for summarizing and understanding all the available data about a particular topic. Researchers must find and analyse all the current knowledge on a subject if they are to present a succinct review. A meta-synthesis consists of a literature review of qualitative studies only. The extracted data is then synthesized into a narrative where the current knowledge on a topic can then be evaluated. Research of a qualitative nature is useful for obtaining the thoughts and feelings of a particular population and can provide crucial

insights into their ontological perspectives. A meta-synthesis process can be a viable approach to deepening our understanding of a distinct body of qualitative research. This case study will provide an overview into how a review of qualitative studies was conducted on a particular health care issue and will explain the process undertaken by the researchers. The study will explain how the search strategy was conceived, how the data was synthesized, and the value a meta-synthesis can add to the body of existing literature.

Learning Outcomes

By the end of this case study, students should be able to:

- Define what a meta-synthesis is
 - Understand the steps in developing a search strategy to find literature
 - Understand how to synthesize data
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Case Study

Project Overview and Context

The idea to explore this particular topic came off the back of another meta-synthesis of qualitative studies we wrote and published that investigated the psychosocial effects on men after prostate cancer treatment. A gap in the literature alluded to the fact that there was a noticeable lack of data pertaining to the effects of prostate cancer treatment on gay and bisexual men. Although there were some research articles written that concentrated solely on gay and bisexual men, the data hadn't been synthesized. We wanted to conduct a review to address this gap in the literature.

Prostate cancer is the second most common cancer in men after lung cancer. Although prostate cancer is more prevalent in black men, men aged over 50, and men with a family history of prostate cancer, there is no evidence to suggest that gay or bisexual men are at a heightened risk of developing prostate cancer. Despite this, the main body of literature has focused on the experiences and needs of heterosexual men, and does not take into account the unique physical and psychological impact prostate cancer and its treatments can have on gay and bisexual men. Gay and bisexual men reported that they were made to feel marginalised and invisible by healthcare authorities. They perceived their urological treatment to be heterocentric in nature. In other words, gay and bisexual men were treated as if they were heterosexual, with any unique sexual or psychosocial problems relevant to gay and bisexual men ignored by urologists. We felt it was important to shine some light on this particular area.

Qualitative studies have been a popular method used for collecting data on the thoughts and feelings of participants after healthcare treatment. Considering the psychosocial and physical effects of prostate cancer treatment, gay and bisexual men had much to divulge on how their minds and bodies were saliently affected. Through listening to the thoughts and opinions of participants, researchers can glean insights into their salient needs. By undertaking a meta-synthesis, we were able to compare and contrast the data of these various studies to see which areas of recovery are in need of improvement, or where participants' experiences diverged.

Section summary

Due to the perceived heterocentric nature of their urological treatment, gay and bisexual men felt marginalized. Qualitative studies are a popular method for gathering the thoughts and feelings of participants. A meta-synthesis can and compare and contrast qualitative data.

Research Design

A literature review, as described by Machi and McEvoy (2016), is a written document that presents a logically argued case founded on a comprehensive understanding of the current state of knowledge about a topic. The purpose of a literature review is to document, analyse, and draw conclusions about what is known about a particular topic (Machi & McEvoy, 2016). The focus of this review was to synthesize the literature on this topic into a singular narrative, and thus be able to interpret and evaluate the current knowledge as posited by the researchers of each study.

A further desire was to gather the ontological perspectives of the participants within each study, and compare and contrast their world views. Ontology is concerned with the nature of social entities, and how the individuals within these entities construct and interpret their understandings of the world around them. Thus, each participant will experience their own interpretation of reality differently from one other. Both qualitative and quantitative methods can be adopted to investigate how gay and bisexual prostate cancer patients view and interpret their world, and to what extent this fits into a larger social whole. Our decision to use qualitative studies only was based on two motives about what we were trying to uncover – qualitative studies

emphasise words and feelings over statistics and numbers, and the study population, gay and bisexual men with prostate cancer, could be identified as a minority population and less easy to quantify.

A qualitative study, as described by Marshall & Rossman (2011) and Patton (1990), is useful to gather insights into the dynamic relationships of attitudes, motivations, and concerns of minority populations. By describing their thoughts, researchers can hear first-hand how study participants are feeling and ultimately discern their ontological perspectives. We opted to do a literature review of qualitative studies to understand exactly how gay and bisexual men were feeling post prostate cancer treatment. This would not be achievable using quantitative methods which cannot discern why an individual feels the way they do in their own words. Qualitative research can also examine the relationship between individuals and an organisation, such as a health care provider, by specifically asking for their experiences. This can be useful in ascertaining specifically why an individual may have had a positive or negative experience during their health care treatment.

A meta-synthesis is the term used to denote a review that contains only qualitative studies. In comparison, a review that only concerns quantitative studies is known as a meta-analysis. Erwin, Brotherson, & Summers (2011) describe a qualitative meta-synthesis as an intentional and coherent approach to analyzing data across qualitative studies and is a process that enables researchers to identify a specific research question and then search for, select, appraise, summarize, and combine qualitative evidence to address the research question. By doing so, the researchers can construct

greater meaning through an interpretative process. That is, they are able to identify and construct new theories, meanings, and interpretations from the synthesized data.

Furthermore, a meta-synthesis process can be a viable approach to deepening our understanding of a distinct body of qualitative research. A meta-synthesis of qualitative literature focuses on selecting and identifying qualitative studies on a specific body of knowledge and translating those findings into one interpretation to offer a richer, more complete understanding of the phenomenon under investigation (Sherwood, 1999). It has been postulated by Zimmer (2006) that a meta-synthesis of qualitative literature is not just an assimilation of literature on a particular subject matter or a secondary analysis of empirical studies from a group of identified research studies; rather, it is an interpretation of the findings of the selected studies. In other words, the researchers conducting the meta-synthesis are not only synthesizing the findings from a carefully selected pool of studies but also are actively engaged in a complex and an in-depth analysis and interpretation of the data. Moreover, Sandelowski and Barroso (2007) have argued that meta-synthesis is more than an integration of the sum of its parts in that it offers a novel interpretation of findings that are combined to offer a greater insight into the phenomenon.

Section summary

The purpose of a literature review is to document, analyse, and draw conclusions about what is known about a particular topic. A qualitative study is useful to gather insights into the dynamic relationships of attitudes, motivations, and concerns of minority populations. A meta-synthesis process can be a viable

approach to deepening our understanding of a distinct body of qualitative research.

Research Practicalities

The systematic process for collecting the literature was adopted from the steps originally conceived by Gewurtz et al (2008). This systematic method is useful for conducting any type of systematic review, whether that be for, as in this case, entirely qualitative studies, or entirely quantitative studies, or mixed methods studies, or for all types of studies. The basic principles are as follows:

1. Identify a relevant research question.
2. Set inclusion and exclusion criteria.
3. Identify and retrieve studies.
4. Assess the quality of the studies.
5. Synthesize findings from across the studies.

As we had already identified our research question, our next task was to decide on our inclusion and exclusion criteria. This is an essential component of the methodology for obtaining relevant literature for the review as it succeeds in narrowing down the literature. It also sets the specifics of data acquisition and ensures the amount of research acquired does not become too cumbersome.

We found it helpful to conduct a quick search on the topic to see what available literature was out there, and the earliest date we could begin acquiring data. Because of the dearth of literature, we decided to begin at January 1990 to capture as much data on this subject as possible. At this stage, a preliminary search is also useful to

identify other types of terminology that other authors are using in their papers. This terminology could then be incorporated into our keywords so as to ensure we did not erroneously miss anything.

Our inclusion criteria therefore consisted of:

- Peer-reviewed qualitative studies
- Published between January 1990 and January 2018
- Participants that were male only, gay or bisexual, single or in a relationship
- Participants who had been diagnosed and treated for prostate cancer

Due to the nature of this review, we obviously had to entirely exclude any articles that were of a quantitative design or were mixed methods. This was stated in our exclusion criteria along with:

- Grey literature
- Other reviews
- Studies that were pre-therapy
- Studies that incorporated other types of cancer
- Studies that included heterosexual men
- Studies that included transgender women
- Non-English language papers

A strong inclusion and exclusion criteria are important to avoid the topic area becoming too broad and to needlessly waste time on irrelevant research studies. It's recommended to be as precise as possible about which studies you are

including/excluding and why. We justified the exclusion of non-English language papers and grey literature (non-published research studies) in the 'Limitations of the Study' at the end of our review. Thus, we noted that the lack of any studies missed out because of our exclusion criteria could have added further value to our overall findings.

Developing a keyword search

As mentioned, it is helpful to see what words authors are using to describe things before constructing a keyword search. Different authors may use different synonyms, acronyms, or various spellings to describe the same thing. For example, our initial search picked up MSM, which is an abbreviation for men-who-have-sex-with-men. However, it was decided to leave this abbreviation out as our search terms had retrieved the one article that contained it.

Our keyword search was thus constructed as:

Prostat* neoplasm* OR prostat* cancer

AND

Gay OR bisexual* OR homosexual*

AND

Aftercare OR needs OR experience*

Section summary

The systematic process for obtaining literature can be adopted from the steps originally conceived by Gewurtz et al (2008) firstly by identifying a research question or a topic. Creating an inclusion and exclusion criteria is an essential part of the process as it narrows down the literature. Developing a keyword search

involves collating all search terms that are used in databases and by other authors in order to locate all relevant articles and ensure nothing is overlooked.

Method in Action

Database Searching

We avoided the inclusion of Thesaurus terms, as it was felt there was not enough literature on this topic that would be revealed by adding terms indexed by each individual database. This way, the keywords could be easily transferred across databases with no need for adjustment to take into account that database's Thesaurus headings. We would have considered using Thesaurus terms if there hadn't been enough literature available. This also would have further enhanced the meta-synthesis, however it would have meant adapting the keyword search continuously.

After searching through each database, a total of 184 articles were identified as being potentially relevant to our review. However, this is where the inclusion and exclusion criteria were implemented to remove any articles that were not actually relevant.

Through scanning the titles and abstracts of each paper, we were able to exclude 132 papers. Another 47 were duplicates, in that they came up on several databases. That left us with 5 articles which met the inclusion criteria and were selected for quality appraisal.

Scanning each abstract can be an arduous process depending on the number of results, and there can be conflicting opinions between the authors on whether an article should be included or excluded. If there is disagreement between authors, it is important to meet as a team to carefully consider the inclusion and exclusion criteria as these are

necessary for determining which article should or should not be included in the review. If a consensus can't be made, a neutral party should be sought to make a final decision. Both authors in this study went through the articles together and we were able to decide immediately whether an article met our search criteria. We put aside any we weren't sure about and came back to them later. We were able to agree on which studies were relevant by referring back to our inclusion and exclusion criteria, as mentioned above.

Reference list checking

Some articles may not appear in the literature search, whether they were not indexed using a keyword adopted for the search strategy or were not available on one of the selected databases. In this instance, identifying an article that was used in the reference lists of the selected articles is a method to ensure no other essential literature is omitted from the review. This method, known as snowballing or hand searching, can help to source additional literature. We checked the references of all 5 articles to identify any further papers that might be of relevance. It transpired that another article was of interest, and so this was sought after, checked, and included in the quota. This pushed the total number of articles up to 6.

Quality Appraisal

The next step was to appraise the chosen articles to ensure the evidence within them is of acceptable quality and that the validity and reliability of the studies are intact. That is, they must pass a number of categories so that the author can be confident that the key components are present, and that any components that are not covered by the study or are absent can be sufficiently explained and addressed. Critical appraisal

tools are commonly used to mark the studies. We can then be confident that those with high marks are of good quality, and can be included in the review. Using studies of low quality and of questionable data can harm the outcomes and reliability of our review and so it's important to ensure selected studies pass a quality check.

We opted to use the qualitative CASP (Critical Appraisal Skills Programme) tool for this meta-synthesis. The qualitative CASP is designed to specifically appraise qualitative studies by asking ten questions. For each question on the CASP tool that a *yes* response is given, one mark is awarded. Conversely, if the response is *no*, then there isn't a mark offered. As there are 10 questions on the qualitative CASP tool, good quality papers should receive 6 marks or above to be included in the review. By investigating if each study could meet the criteria, we were able to determine the quality of the evidence. For example, every study was able to present a clear statement of their aims and analyse their data sufficiently and so earned marks for this. On the other hand, none of the studies addressed whether or not any conflicting relationships with the participants had been considered. As a result, all the studies were each marked down for this omission. Ultimately, all achieved at least a mark of eight and were considered of high quality, and thus we were confident in their reliability and validity.

Synthesis

The final part of the methodology was to extract the data. We followed the guidance of Noblit and Hare's (1998) seven step approach to synthesizing data. Both authors read through the articles, and highlighted any data they felt was relevant to the review. Three papers were coded independently to get an idea of what codes were visible. The

authors met and decided on the codes in order to assess inter-rater reliability. Once agreement was sought, the remaining papers were coded by one researcher. This data was then extracted from the studies and placed into a table. Examples of codes we used included *sexual activity*, *erection problems*, *emotional distress*, and *incontinence*. By coding our data, it was easier to identify common elements. Thus, we were able to achieve a first order synthesis as described by Noblit and Hare (1998).

Next, we need to achieve a second order synthesis by translating the studies into one another. This entailed the authors meeting again to group these common elements together. Hence, any codes that made reference to *emotional distress* were aggregated together from all six of the studies. By doing this, we were able to develop common concepts and meanings. The aggregated data was then arranged into subthemes, which may involve a number of codes merging together. For example, *sexual aids* and *orgasms* were included under the subtheme *Sexual Satisfaction*. Men described their difficulties in achieving orgasms. We were able to link these codes with *sexual aids* which detailed how men were able to achieve orgasm with the help of stimuli. Finally, the authors met to develop overarching themes to incorporate the subthemes under. These themes formed a third order synthesis from which the authors can develop their own ideas and theories. By following this pattern, we were able to create new interpretations of the synthesized data and therefore construct new meanings, as postulated by Erwin, Brotherson, & Summers (2011). So for example, *Sexual Satisfaction* as a subtheme was paired with *Effects on Couplings* to create the overarching theme *Challenges to Intimacy*.

By creating four themes, we were able to demonstrate that we had interpreted and categorised the qualitative data succinctly, and were now in a position to glean and present new details from the studies. This wasn't without its challenges. It took several attempts to group the subthemes together. Some went together easily. Others were trickier to classify. Both authors had to meet a number of times to discuss and refine the themes until we were happy with their final grouping.

Section summary

Search a variety of databases to find appropriate literature. Be prepared to check reference lists and use Thesaurus headings to avoid missing any relevant studies. Select a quality appraisal tool and score the selected studies to ensure they are of good quality. Extract the data from the studies and code it, aggregating it into subthemes, and then overarching themes to achieve synthesis.

Practical Lessons Learned

It is always best to check what literature is available and where it can be located before embarking on a meta-synthesis. A preliminary check of databases can provide proof that there is enough literature on a topic to warrant undertaking a review. We limited ourselves by restricting our search to qualitative studies only. Some topic areas may have more quantitative data and so a systematic review with a meta-analysis could be the approach. Alternatively, some may have both quantitative and qualitative literature and therefore an integrated review could have been adopted

instead. Although our pool of studies was small, we were still able to extract enough data to write a paper.

Identifying and searching key databases can be crucial. Some databases will index research pertaining to their particular demography. For example, we searched Cochrane which is specifically for systematic reviews, but this database needn't had been included in our search strategy. However, any papers discovered there may have referenced studies that may have been useful to our review. Additionally, Cochrane may show reviews that have already been conducted, or are in the process of being undertaken, and can determine whether or not a meta-synthesis should be applied. Because of these two factors, we decided to include Cochrane in our search strategy.

What we have found is that many authors conducting meta-synthesis do not necessarily offer a step by step guide of how they arrive at their themes. This area seems less clear. For this review, both authors have attempted to be as transparent as possible for the benefit of others learning about how to conduct a meta-synthesis. The themes formation is a challenging aspect of any systematic review and indeed, it was a challenge for us. It is really important that everyone on the team sets aside time to meet for the development of themes. Depending on the number of codes and sub themes such analysis could take several days and this must be factored into the equation. We had anticipated that our emergent themes should take us no longer than a day, however this was not the case. It took us at least 2 days to confidently say that these over-arching themes were reflective of the research aim and represented the views and experiences of gay and bisexual men collectively.

Conducting a study of this kind requires two or more researchers. If you are considering doing a review on your own then it would be better that you seek support from other colleagues who can contribute to different aspects of the review and who will challenge you throughout the process enabling the review to be much more rigorously conducted. Moreover, the review can stand up to scrutiny when a team with different skills are involved. There may be less fault finding by critics when a team approach is used.

Section summary

Ensure there is enough literature available to justify a review. A preliminary check of databases should be done beforehand. Select key databases that are relevant to the topic. Some databases will index research pertaining to a particular demography. Work closely with fellow authors to develop themes and interpretations. Defer to a third party when disagreements occur.

Conclusion

This case study concerning a meta-synthesis into the experiences of gay and bisexual men and prostate cancer has provided an account of how the research methodology was approached, designed, and undertaken. We found that using a meta-synthesis can highlight key points across a range of qualitative studies, and that new meanings can be derived and interpreted from the synthesized data. The method is ideal for combining qualitative data on a particular topic and achieving a deeper understanding of the contextual similarities and differences that arise. As a result, we feel we have greater knowledge on how gay and bisexual men may feel due to prostate cancer, and

this can be linked to various aspects such as age and relationship status. An overview of qualitative studies has enabled us to be certain that such aspects are common and not restricted to a particular demography. We feel confident in advising health practitioners of our recommendations, supported by the data from various studies. This was achievable through following a sound systematic methodology.

Apply a rigorous approach to your own methodology, and ensure that you can justify why you have chosen to interpret qualitative data. Set your inclusion and exclusion criteria early and update it, if necessary, as you progress. Acknowledge any weaknesses in the research design and the search strategy. Reviewers will want to know why you have not incorporated elements that might have contributed to your data collection. Try to capture as many studies as possible and use as many databases as you can. Finally, ensure there is enough research available to begin a review in the first place, and then be prepared to bring something new to the table once you have synthesized the data. What else can you offer that hasn't already been declared? You may want to investigate grounded theories and apply them to your results. Theories may help you interpret qualitative data in a new way.

Section summary

A meta-synthesis can highlight key points across a range of qualitative studies.

New meanings can be derived and interpreted from the synthesized data.

Classroom Discussion Questions

1. Identify one reason for undertaking a meta-synthesis of qualitative studies?
2. What benefits do developing an inclusion and exclusion criteria have?
3. Why should studies undergo quality appraisal if they've already been peer-reviewed and published?
4. Why should researchers interpret new findings from synthesized data?

Multiple Choice Quiz Questions

[Insert three to five multiple choice quiz questions here. Each should have three possible answers (A, B, C). Please indicate the correct answer.]

1. A meta-synthesis is a literature review of studies that have used which research method?
 - A. Quantitative.
 - B. Qualitative. CORRECT
 - C. Mixed methods.

2. Why is it useful to undertake a preliminary database search first before committing to a meta-synthesis?
 - A. To check there is enough available literature on a topic. CORRECT
 - B. To check for Thesaurus terms.
 - C. To find a quality appraisal tool.

3. What is the first step of Gewurtz's systematic method for conducting a literature review?
 - A. Identify and retrieve the studies.
 - B. Synthesize findings from across the studies.
 - C. Identify a relevant research question. CORRECT

4. When synthesizing data, what emerges from a third order synthesis?
 - A. Themes. CORRECT
 - B. Codes.
 - C. Sub-themes.

Declaration of Conflicting Interests

The Authors declare that there is no conflict of interest.

Further Reading

Bryman, A. (2016). *Social research methods*. 5th edn. Oxford: Oxford University Press.

Hannes, K. and Lockwood, C. (2012). *Synthesizing qualitative research: choosing the right approach*. Chichester: John Wiley & Sons.

Holloway, I. (2008). *A-Z of qualitative research in healthcare*. 2nd edn. Chichester, UK: Wiley-Blackwell.

Paterson, B. L. (2001). *Meta-study of qualitative health research: a practical guide to meta-analysis and meta-synthesis*. Thousand Oaks, California: Sage publications.

Sandelowski, M., Docherty, S., & Emden, C. (1997). Qualitative metasynthesis: Issues and techniques. *Research in Nursing and Health*, 20, 365–371.

Web Resources

The main CASP website can be found here: <https://casp-uk.net/>

References

- Erwin, E. J., Brotherson, M. J., & Summers, J. A. (2011). Understanding Qualitative Metasynthesis: Issues and Opportunities in Early Childhood Intervention Research. *Journal of Early Intervention, 33*(3), 186–200.
- Gewurtz, R., Stergiou-Kita, M., Shaw, L., Kirsh, B., & Rappolt, S. (2008). Qualitative meta-synthesis: Reflections on the utility and challenges in occupational therapy. *The Canadian Journal of Occupational Therapy, 75*(5), 301–308.
- Machi, L. A., and McEvoy, B. T. (2016). *The literature review: six steps to success*. 3rd edn. Thousand Oaks: Corwin.
- Marshall, C., & Rossman, G. (2011). *Designing qualitative research*. London: Sage Publications.
- Noblit, G. W., & Hare, R. D. (1988). *Meta-ethnography: Synthesizing qualitative studies*. Newbury Park: Sage Publications.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. London: Sage Publications.
- Sandelowski, M., & Barroso, J. (2007). *Handbook for synthesizing qualitative research*. New York, NY: Springer.
- Sherwood, G. (1999). Meta-synthesis: Merging qualitative studies to develop nursing knowledge. *International Journal for Human Caring, 3*, 37-42.
- Zimmer, L. (2006). Qualitative meta-synthesis: A question of dialoguing with texts. *Journal of Advanced Nursing, 53*, 311-318.