**Online Workshop: Qualitative Research Synthesis**

**Session 3: Methods for Synthesizing Qualitative Evidence**

Presenter: Ruth Garside

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Disability and Rehabilitation Research (KTDRR)

Edited transcript for audio/video file on YouTube:

<http://youtu.be/O3T2ib9RvI4>

Joann Starks: Good afternoon, everyone. I’m Joann Starks of SEDL in Austin, Texas and I’ll be moderating today’s webinar entitled “Methods for Synthesizing Qualitative Evidence.” It is the third in a series of four webinars that make up an online workshop on qualitative research synthesis. I want to thank my colleague Ann Williams for her logistical and technical support for today’s session. The webinar is offered through the Center on Knowledge Translation for Disability and Rehabilitation Research, KTDRR, which is funded by the National Institute on Disability, Independent Living, and Rehabilitation Research. The KTDRR is sponsoring a community of practice on evidence for disability and rehabilitation or D&R research. Evidence in the field of disability and rehabilitation often include studies that follow a variety of qualitative research paradigms. Such evidence is difficult to summarize using traditional systematic research review procedures. The goal of this series of web-based workshops is to introduce D&R researchers to the methodology of qualitative evidence reviews. Participants will be provided a state-of-the-art overview on current approaches and will learn to apply those to the literature base. Ongoing innovative initiatives at review-producing institutions will be highlighted.

 Today, our speaker is Dr. Ruth Garside, senior lecturer in evidence synthesis with the European Center for Environment and Human Health located at the University of Exeter Medical School. She is a social science researcher with over 15 years experience using quantitative and qualitative research methods to investigate a range of policy-relevant health and social care questions. Her work has informed national policy customers including the National Institute for Health and Clinical Excellence and the UK’s Home Office. She is particularly interested in using a broad range of evidence to investigate complex public health issues and has a particular interest in methods of synthesis for qualitative research and recently in theory-led methods of review. She is a convener for the Cochrane Qualitative and Implementation Methods Group. Welcome, Ruth, and thank you for agreeing to conduct a session today on Methods for Synthesizing Qualitative Evidence. If you’re ready, please go ahead.

Ruth Garside: Thanks very much for that, Joann, and thanks for having me here. As you say, I’m going to talk about Methods for Synthesizing Qualitative Evidence. The plan for this afternoon session is to have a look at the different approaches that are suggested for synthesizing qualitative research and to look at the spectrum from the more aggregative to the more interpretative method. I’ll give a slightly more detailed example of two qualitative synthesis methods, thematic analysis and meta-ethnography, talk a little bit about how you present the findings from a qualitative evidence synthesis, and finally some details about knowledge translation. So my talk follows on from previous presentations that you’ve had about the nature of qualitative research, systematic review methods, the whole process of systematic review, searching for qualitative research, quality appraisal and data extraction, so I’ll be presenting about what you do next once you’ve gone through those initial processes to assemble the evidence base about the question of interest.

 What is synthesis anyway? We consider that the combination of two or more items to make a new whole is a synthesis product, and the combination of these ideas forms a theory or a system or a new taxonomy or a new typology. The important thing is that synthesis produces new knowledge, which goes beyond the sum of its parts. Why do we want to synthesize qualitative research? There are a number of different reasons for this. Certainly in health services research and other clinical research, the evidence-based practice movement has meant that particular styles of research tend to become more prevalent and particularly qualitative research can get marginalized despite the useful information that it can produce. So certainly for some researchers, synthesis of qualitative research has been a strategic move to make sure that systematic reviews include the possibility of using synthesized qualitative research evidence and move qualitative research from the sidelines back into the center. Beyond those strategic concerns, it’s certainly true that it’s less wasteful to reuse and reexamine and redevelop the ideas that are produced from primary qualitative research data by bringing them together in a synthesized product, and the reason that syntheses are so appealing are because they have the potential to create more powerful explanations or higher order concepts by looking across different studies. This in turn can produce broader, more encompassing theories, and some authors have gone as far as to say that it will yield truths that are better or more socially-relevant or more complete to bring together the findings from separate research projects on similar topics. Finally, it can enhance the transferability of findings from individual studies. Qualitative research can often be criticized for being very local or really only relevant to a particular context. What synthesis offers is the opportunity to look at ways in which different findings might be similar across different contexts, different populations or different conditions, but still be meaningful, so it offers the possibility for findings from individual studies to have relevance across a broader range of topics and context.

 The next slide that I’m showing is a table, which shows a framework for synthesis of qualitative research from a study that I did in 2008, and this shows the slightly different approaches that there might be to the different steps of systematic review for a review of qualitative research versus a review of quantitative. On this left hand side, the different stages of review are described, and on the right hand column, the typical activities that take place within those activities are listed. So when thinking about developing a research question, it’s common to have a much more consultative team-led approach to agree the approach to answering a question. You then might do a scoping exercise to identify relevant research and refine the methods that will be used to look at the research in total. The step of identifying relevant literature will refine those search approaches to develop inclusion/exclusion criteria, to develop focus searches and to use alternative approaches to searching such as citation searches and contact with experts. Once you’ve identified the studies which meet the inclusion criteria, the process of analysis and synthesis can start and the first thing that happens is that all the papers would be read in a preliminary reading to identify theories, to assess the utility and relevance of different papers to the research question.

 Then there are analytic steps to the synthesis: the first is analysis and synthesis where the study reports are read and reread and the findings compared using a constant comparison method and the study validity is appraised. The next step would be to develop a preliminary synthesis and this might use any of the techniques that qualitative researchers are familiar with for thinking about organizing and categorizing ideas, so different approaches to tabulating, creating mind maps, exploring relationships between the different findings in the different studies before moving on to the full synthesis stage which might involve a thematic analysis or translating findings between the studies, developing theories and particularly looking for rival explanations or dissonant cases as you might with primary research. Once the synthesis is done, there will be dissemination to target the appropriate audiences and this will include discussing the limitations of the review. Throughout the process, it’s really useful to have multiple viewpoints so that different disciplines and different paradigms can be brought onboard to understand the research that comes from those different paradigms which is included in the review. Reflexivity, being aware of your own influence on the interpretation of the findings is also important and it’s really a very consultative process to ensure that the findings make sense to a range of audiences.

 So this presentation I’m highlighting on the slide will focus on those middle synthesis stages and dissemination stages to describe the different processes of synthesis. There’s a big range of approaches and terminology about evidence synthesis and qualitative research. There are several umbrella terms, which don’t refer to a particular method, but describe any synthesis of qualitative research, and those are qualitative evidence synthesis and meta-synthesis. In terms of specific approaches, this isn’t a complete list because the labels seem to proliferate year-on-year, but as a selection – and these are in date order, so the earliest approaches were described meta-ethnography, there’s meta-study, narrative synthesis, realist synthesis, meta-narrative review, critical interpretative synthesis and qualitative interpretative meta-synthesis. There’re more than these. There’re also aggregative synthesis and various others, but many of them have only been used in one or two synthesis and haven’t really been further developed. Some of the most common approaches are meta-ethnography and narrative synthesis, which is why I will be talking about those in a bit more detail today.

 In terms of thinking about what the differences are between the syntheses, the common way of thinking about them is to think about those synthesis approaches, which are more aggregative, and those which are more interpretative. So the aggregative approaches have a more additive approach and tend to do less interpretative conceptualization in the analysis, so they’re more interested in identifying the existing themes in the papers which have been identified for inclusion in the review, and then to summarize those, it’s a more deductive approach which have more in common with a positivist paradigm. It’s helpful where concepts are clearly predefined rather than where they need to be redeveloped. In contrast, the more interpretative approaches are usually looking to develop concepts and theories to explain the evidence base. They take an inductive approach, building up from the evidence and try to find new ways of interpreting existing findings that make those interpretations broader or more powerful or operate across more of the finding.

 This slide which I’m showing shows a continuum between aggregating and interpreting reviews. There’re two overlapping ovals which show the configuring or interpretative reviews on the left hand side and the more aggregating approaches on the right hand side. Then it lists a number of different approaches to synthesis to apply them across this continuum with the more interpretative to the left and the more aggregating to the right, so meta-ethnography and thematic synthesis are more interpretative or configuring reviews; thematic summaries, content analysis and meta-analysis are more aggregating with realist synthesis and framework synthesis somewhere in the middle and it also describes the different ways that theories are applied in these different approaches to synthesis. So whereas the purpose of the more configuring or interpretative reviews tends to be to generate theories, so you’re building theory out of the evidence base, the more aggregating reviews on the right hand side like content analysis and meta-analysis are more likely to test theories, so it’s a more deductive approach. Any interpretation that happens for those kinds of reviews would normally happen before and after as a way of framing the question and using the findings, whereas the interpretative reviews use the interpretative work through the synthesis itself.

 So given this range of methods, what are the ways to decide which method is appropriate for your synthesis? There are a number of different things to consider. It may purely depend on the time and resources that you have to give to the review. The more aggregative reviews tend to be quicker because there’s less interpretative work involved, whereas the interpretative reviews tend to take longer. That may also reflect the experience of the review team. If you have a more experienced team which have got a lot of qualitative experience, they may be much more comfortable with using the interpretative approaches whereas review teams who are doing a qualitative synthesis for the first time or don’t have a lot of qualitative research experience may find it more straightforward to start with a more aggregative approach. It may also depend on what the purpose of the review is. If you want to be producing more theories, then obviously those interpretative approaches are going to be more appropriate. If the purpose of the review really is to summarize what’s known about different locations, then it might be sufficient to do the aggregating. It may also depend on who you’re presenting for whether it’s being presented for a policymaking audience or a more academic audience who may have a different balance of interest in the theory-rich versus the more descriptive study, although some of us would argue that the theory-rich syntheses should be taken more seriously by policymakers given the usefulness of really good theory in explaining complex situations. Finally, the type of evidence available can affect which approach is most appropriate. The more interpretative approaches tend to be better where you have theoretically rich initial papers, whereas very descriptive papers might be more amenable to a more additive approach, so all those things will influence which approach you take.

 I’m going to move on to describe in a little more detail what two different synthesis examples look like and the first one is going to be looking at a thematic analysis or a thematic synthesis approach. This approach has its origins in existing primary qualitative research methods, so anybody who’s familiar with doing a thematic analysis on primary qualitative research data will find these processes very familiar. It echoes those approaches quite closely and may use similar line-by-line coding. An alternative is to extract the themes from the papers, identify specific findings within the papers and just extract those and then moving on to coding rather than doing line-by-line coding through the whole finding. The codes in the thematic synthesis are often descriptive, but depending on the theme and the time and their skill, these may be built up into something more conceptually rich as well.

 So I’m showing a screenshot now of the report which will be the basis for this description. It was written by the EPPI-Centre which is a UK-based Evidence for Policy and Practice Centre based in London and it was written in 2003. It’s about children and healthy eating and they had a look at the systematic review of barriers and facilitators to children eating more healthily and there’s a web address if you’re interested in having a look; it’s freely available. What this review team wanted to know was four-linked questions. They wanted to know what children’s perceptions of and attitudes towards healthy eating were. They wanted to know what children’s thoughts stopped them from eating healthily and what helped them to eat healthily, and finally, they wondered if children had ideas for what could or should be done to help them eat more healthily. So those were the review questions which were addressed. The thematic analysis was undertaken in three stages, so as I said, the initial coding was line-by-line coding of the papers which were identified. Those codes were driven by the data. They developed them from the information that was found across the different papers. These were then grouped into descriptive themes as a second step, and finally, the review team developed a set of more theory-driven codes which they referred to as analytic themes trying to just identify key theoretical ideas within the data.

 So in order to do that, each study was loaded up into NVivo software for doing qualitative coding and each sentence or paragraph was assigned a descriptive code to describe what that finding was about. For example, children prefer fruit to vegetables was one of the initial line-by-line codes. Similarities and differences between the codes were then sought to group them into a hierarchy called tree structure to develop these descriptive themes. New codes were created to capture the meaning of these initial codes and they produced a narrative summary of the findings across the studies which were then organized by those 13 descriptive themes and I’ll show you what that looked like. Sorry, the text is a little unclear on this slide, but this shows the hierarchical tree coding structure for this review, so on the left there are two main nodes, understanding of healthy eating at the top and influences on foods eaten at the bottom. The understandings of healthy eating have three sub-themes which fed into that, so that was awareness and understanding of healthy eating concepts, good and bad foods and health consequences. Attached to the node which is an overarching descriptive theme about foods eaten and the influences on those, there are then two sub-themes attached to that: chosen foods and provided foods, so those are foods that the children have the ability to choose for themselves and those which are provided to them. This provided food section is further divided into food provided in school and food provided in the home. So these hierarchical categories are a way of organizing the findings of these initial 13 descriptive codes.

 As I said, as well as these coding systems, the authors also wrote a textual paragraph to describe each of the descriptive themes. This is from the top descriptive theme which is about understandings of healthy eating and there were three categories attached to this. This is the one about good and bad foods, so this is an example textual paragraph. You can see that it tells you something about what was said and how much of the evidence talked about it. So the first sentence is three studies: ask children to name good and bad food and their reason for this classification. So already, it’s starting to show you how much of the evidence base included in this synthesis contributed to this particular theme, and then the next part of the paragraph show that children in these studies readily use food health or food nutrition links as reasons for labeling foods good or bad and they understood examples such as fat is bad because it causes heart disease, vegetables are good because they have vitamins and they also provide some examples of the sorts of food that children thought of as good and bad. So this is giving you a summary about some of the thematic ideas, but also the amount of evidence within the evidence base that contributes to each of these themes.

 So once they’ve gone through those initial two steps of coding, the line-by-line coding to develop the data-driven codes and then the development of these into the descriptive themes that we’ve just been looking at, the question was about whether or not the data-driven codes were useful to their customer who was a policymaker. So they did some further analytic work to try and identify from those themes information that would be relevant to the policymaker who would commission the work, so this is the stage where it becomes more interpretative because the inferred from those descriptive themes the factors that might help and hinder healthy eating, and that was important because that was what the policymakers wanted to know in order to understand what aspects they needed to address to try and encourage more healthy eating in children. So there were six analytic themes which were developed by interpretation of those descriptive themes by the reviewers in order to translate, if you like, the information that they had built from the data into a policy-relevant statement. So these are the first three that they found: children didn’t see it as their role to be interested in health; they did not see messages about future health as personally relevant or credible because it was too far in the future for them to think that they were going to get heart disease or something else if they ate the wrong food; and also that there were very different meanings that children had for different sorts of food, so fruits and vegetables were thought of as very different. Whereas fruits might be quite a nice, tasty, interesting food, vegetables were not seen in the same light and that obviously had implications for policymakers who tended to promote fruit and vegetables in the same way.

 The other findings which were relevant were that children actively sought ways to exercise their own food choices about food, so although there were a number of situations where they didn’t have much choice about food in the home or in the school, children wanted to make their own choices and that could be a variable way in for policymakers. It was also seen that children valued eating as a social occasion to eat with their friends and to eat with their family which again was felt to be a useful policy-relevant observation, and there was also the observation that children noted that what was promoted in theory and what adults provide in practice wasn’t always the same, so adults weren’t helping to reinforce the healthy eating message through some of their own practices and through things like providing treats as a norm. So this synthesis is quite comprehensive and you can see from the summary the different ways in which the analysis and synthesis moved from the more descriptive bottom-up data-led stuff to more interpretative work which was done at the end to try and make sure that the findings of the thematic synthesis were relevant to policymakers.

 Okay, so I’m now going to move on to the second example of synthesis and this is going to describe one of the most interpretative approaches known as meta-ethnography. This slide is showing a screenshot of the original textbook by Noblit and Hare which was published in 1998 as part of their qualitative research method series and it’s called “Meta-Ethnography: Synthesizing Qualitative Studies.” It wasn’t really picked up in the context of systematic reviews and evidence syntheses until much later on, so this screenshot which I’m showing is a paper from 2002 which was the first to pick up that Noblit and Hare method of meta-ethnography and apply it in a new context in the context of health services research. This paper is called “Using Meta-Ethnography to Synthesize Qualitative Research: A Worked Example,” and they were really trying to establish where the synthesis approach would be workable in this new context. It’s written by Britten and colleagues and contains quite a useful description of the processes of synthesis. This was important because the original paper written by Noblit and Hare was used to synthesize three or four analyses of a schools-based research which was all using participatory observation methods. They were all ethnographic studies and so the development of meta-ethnography into examining other sorts of qualitative research, it wasn’t clear until this paper that that was going to be a feasible approach.

 It’s worth noting that because of this history, the book about meta-ethnography is primarily about synthesis, so it doesn’t talk about a lot of the other parts of systematic review process that you’ve been learning about as part of this call. There’s no guidance in the original text about search strategies or inclusion criteria or quality appraisal tools supplied outside of the synthesis because it was developed from a completely different need. It wasn’t developed as part of the systematic review world; it was developed as part of an ethnographic research world. In fact, Noblit, in a paper in 2004, said that he was amazed that the method was being used mostly in fields of professional practice and as evidence-based practice because that hadn’t been their purpose in developing it. It’s a method that’s kind of been slightly hijacked and which has been slotted into the systematic review process although that’s not really its history, and obviously that means that there’ve been some adaptations of the approach as it’s been used in different sorts of research and synthesis.

 So in this book, the definition of what synthesis is and does is very explicitly interpretative. Noblit and Hare talk about the activity or the product of an activity where some set of the part is combined and integrated into a whole and they emphasized that there is conceptual innovation or the employment of concepts that aren’t found in the original part as a way of creating a whole. So what that means is that it’s positioned very much at the far left of the diagram which shows which methods are more interpretative and it also promotes new concepts and also the possibility that you can import concepts from outside the evidence base if those help to explain or theorize around the finding and that’s seen as very legitimate in this approach. Noblit and Hare listed seven stages of synthesis: getting started, deciding what is relevant, repeated reading of the studies, deciding how studies are related, translation, synthesizing the translations and expression the synthesis. Although you can see that there is some overlap with this approach compared to that description of the frameworks or review in evidence synthesis, there are also some differences. So for example, getting started and identifying an area of interest, according to Noblit and Hare, this is very much about research interest rather than being driven by policy questions or practice questions in the way that many syntheses are now. Similarly in deciding what is relevant, they say that unless there is some substantive reason for an exhaustive search, generalizing from all studies of a particular setting yields trite conclusions, so they were concerned about the difference between a rich analysis which might be quite conceptually deep versus a surface analysis of lots of cases. You can see again that this might be considered to be quite opposite to what systematic reviews normally want to do which is around having a very comprehensive representation of the evidence base in the review and synthesis. Again, that’s just an example of how in some of the ways that Noblit and Hare think about the synthesis, there’s a lack of fit between what they say and the more traditional systematic review world.

 In terms of their approach to synthesis, the key method that they describe is translation – translating one study into the other, and they talk about constant comparison and exploring the cases to be able to make the statements about why one case is like another, so one case is like another except that. So you’re looking for similarities and differences across the concept and throughout the included ideas. The important thing about translation is that it occurs at the level of existing interpretations of the data, so it occurs at a conceptual level. It takes the concepts and theories that have already been developed in primary research and works with those to translate the interpretations across papers. This builds on Schultz’s definition about how we make sense of the world and different levels of interpretation. Schultz said that in research there were first order and second order constructs. The first order constructs are our everyday ways of making sense of the world and these would be illustrated in a qualitative research paper through participant quotes, so those reveal how the participants are making sense of their experiences and their lived world. The second order constructs would be the academic concepts and theories that social science researchers use to interpret what the participants in their research say. So for the meta-ethnography translation, this happens at the level of the second order construct. It’s interpreting existing researchers’ interpretation. Some reviewers have suggested that what the meta-ethnography does is to produce third order constructs, so these are then the reviewer’s interpretation of the researcher’s interpretation. Although other people have said that it’s still second order constructs because it’s still researchers interpreting other concepts, but it’s quite useful I think as a tool to think about the different levels of interpretations, to think about first, second and third order constructs as participants’ initial research interpretations and then the reviewer’s interpretations of those initial ideas.

 This next slide tries to illustrate what that might look like in practice, so it’s a table with three columns. The far left is for first order constructs or quotes from participants. The middle column is then the researcher’s interpretation, and finally it shows the reviewer’s interpretations on the final far right column. So there’re two rows giving examples from two different studies in a synthesis. In the first row from Study One, the first order construct is a quote which says “Pamphlets involve a lot of reading. Food sampling gives them the opportunity to feel relaxed and ask questions.” This comes from a piece of research which was looking at programs to prevent cardiovascular disease. It was looking at interventions which tried to influence people’s food choices again. So the researchers’ interpretation of that quote was that practical demonstrations of food were more effective than just providing written information to engage people in understanding healthy eating. On the second row, there’s a quote from a different study which was also about a provider of some information which was aimed at preventing cardiovascular disease and the quote says, “Sue was great. She had loads of information and advice,” and that’s the quote from one of the participants. The middle column again shows the researchers’ interpretation of that quote which was that program champions were effective at disseminating information about the intervention.

 The final column which shows the reviewer’s interpretation has looked at both of these examples and considered that actually they’re talking about a similar concept, a similar phenomenon, so rather than separating out practical demonstrations and program champion, the reviewers have suggested that its personalized support which allows relationships to develop and facilitate questioning may be more effective, so that’s understanding that the important thing about both of these two examples, providing food sampling and having a program champion, is that it allows a relationship between the person who’s giving advice and the person who’s receiving it and it allows questions and personalized information to be given. That was the interpretation which the reviewers put across both of those and you can see when I was talking earlier about building higher level theories which are applicable across more than one situation, this final column which talks about allowing relationships to develop and facilitating questioning could be interpreted in a number of different ways across different settings and could be adapted to be more appropriate in different settings, but it provides information which encompasses more than just that one specific example.

 So I’m now just going to talk a little bit about the types of translation that Noblit and Hare described and give some illustrations about what that looks like. So the first sort of translation that Noblit and Hare described is called reciprocal translation and they say that this is a way in which each study is translated into the terms of another and vice-versa. This works as I said at the level of metaphor themes or organizers which allow us to render the account in a reduced form. The example that I just showed you about cardiovascular disease is an example of reciprocal translation where we’re saying that these are talking about similar things and they are translated in terms of each other. The reciprocal translation is similar to a constant comparison approach or looking between the studies of particular findings and trying to understand where there are similarities. It looks for overlap similarities and contradiction and it may also try and use concepts within one paper to encompass more than one in another. There are some concepts that are better; they have a broader scope or more explanatory power. Again, reviewer interpretation is really important and crucial to doing this. That example that I showed you about cardiovascular disease, the final sell was an interpretation of two existing concepts within the evidence base from different papers. At this stage of doing the reciprocal translation, you might be looking to juxtapose different concepts using whatever tools help to examine, explore and juxtapose the concepts within the different studies that you’re synthesizing, so depending on what you find useful, tabulation might work, mind maps, color coding, text descriptions, often a combination of all these things to organize and understand the findings across the different studies is really helpful.

 So I’m showing a slide; again, unfortunately the text isn’t brilliant, so I’ll read it out. This is showing another example of a reciprocal translation and it’s from a review that I was involved in with colleagues about the experience of heavy menstrual bleeding for women. The table has got six columns and on the far left, it’s got a label which I as the reviewer have assigned to the concepts across other studies, so the middle four columns show concepts that have come from the four papers included in this synthesis. At the far right hand side, there’s that interpretative third order concept which shows how we have interpreted what’s been said. So what this does effectively is to illustrate where the translation is happening, so there in the first row there are four quotes, one from each of the four studies which have been put into that row. They’re showing that we’ve considered those to be similar concepts that we’ve translated into each other and then there’s an interpretation, whereas lower down in the table, there are only two of the four studies which have contributed to the other rows, so there’s less of the evidence base contributing to the synthesis. If I just look at one of these in a bit more detail, the first row has been given a label by us which says that doctors fail to acknowledge women’s experience a symptom. Across the four included studies, the first showed that the researchers reported that women needed to be listened to and to be understood. The second study found that doctors need to hear and respond to women in a way that was concordant with their concern. The third study found that GPs or general practitioners did not listen carefully to women’s concerns and that women’s concerns were not taken seriously. The fourth and final study found that women were repeatedly told that nothing was wrong with them when they talked about their symptoms.

 So you can see that we’ve interpreted all these things in the different studies as being about a similar phenomenon and we interpreted this to show that doctors may not value the subjective description that women gave of their symptom. You can see how this was built up in the translated concepts here, so the four studies have been translated as being about the similar thing. We’ve given this a label that doctors fail to acknowledge women’s experience as symptoms, and finally we’ve interpreted this as doctors not valuing subjective descriptions as symptoms when they were trying to understand about heavy menstrual bleeding. I’ll give some more details about this particular synthesis in a minute which will hopefully illuminate those findings a little bit further. Again, this is just to give another illustration of the way in which syntheses across different studies might work. This is taken from the Britten et al paper, 2003, which was about patient approaches to taking prescribed medication. It takes a similar approach to presenting the findings and the translated concepts across the studies, but it’s slightly different to the way that we did in the other studies, so this is just another example. In the first column, the table shows descriptive concepts across the primary studies. The second column shows the second order interpretations of those concepts, so that’s the social scientist’s interpretation of what was found in the papers, and the third order concepts in the final column are the reviewer’s interpretation.

 So if we take an example from the first row, concepts within the primary studies included in the review were around adherence and compliance about correct and routine medicine taking, self-regulation or problematic adherence or leaving of drugs. So those were approaches that some of the participants had to their drug regime. Another group of people had an aversion to drug taking, so people disliked taking drugs and were worried about harmful side effects. Finally, some of the participants illustrated alternative coping strategies such as using traditional or complimentary medicine. So the second order interpretations of these findings is shown in the second column and these were that patients conduct a cost-benefit analysis to weigh up risks and benefits of the drugs that they’re prescribed and to decide whether or not they want to take them, and secondly, that medicine taking could be influenced by cultural meanings of drugs and resources that people had to take alternatives. The final third order interpretation of all of this stuff was that self-regulation was important and that it included the use of alternative coping strategies, not just not taking it, but the original alternative strategies like using traditional medicine or leaving off drugs if they felt worried about side-effects.

 So again, this is reciprocal translation looking at the ways in which different concepts across the papers might be interpreted. The second type of translation that Noblit and Hare talk about is refutational translation. There are probably less examples of this in the literature than there are of the reciprocal translation. Refutational translation looks for oppositional or counterarguments in the findings, so particularly differences which can’t be explained by differences in the context or population of the studies which have been included or any other explanatory reasons for why there are differences. Noblit and Hare suggests that you should make sure that you explicitly look for themes and concepts that oppose or refute emergent patterns in the synthesis and this might be a similar approach to primary qualitative research where you look for discordant cases to test your emerging theories and ideas. So I’m going to show you an example of this. Again, this is from a review about women’s experiences of heavy menstrual bleeding and this is another similar column in the table set up in the same way. This is looking at themes about uncertainty and influences on seeking medical help that we saw across the papers, so again it’s got six columns, a label that we had for the translated concepts, the four included studies, and finally an interpretation. I’ll focus on this final row which shows a refutational finding. Two of the studies found what we decided were refutation findings. One study said that others encouraged women who had heavy menstrual bleeding to enter the sick role and to regard their experiences as being indicative of a clinical problem. Another study found women reported that other people belittle the level of their suffering when they had heavy menstrual bleeding and suggested that they were making a fuss about nothing or that it was a normal experience.

 These are obviously opposite findings. On the one hand, others are encouraging women to consider themselves as ill and the opposite in a different study suggesting that others belittled the level of suffering that women were experiencing. We didn’t have any explanations for why these differences were found in the different studies. There didn’t seem to be anything significantly different about the population or the context or about who it was who were the others in this different paper. So we interpreted this as simply showing that women were liable to be influenced by external sources and that these might either encourage or discourage them from accepting the validity of their experience about whether or not their experience should be considered to be clinically problematic or just part of the general experience that women went through.

 The final type of translation type is known as a line of argument and this asked the question, what can we say about the whole? It often relates to the development of a new model or theory or a new understanding through the entire process of synthesis. I’ll show you a couple of examples and these also start to speak to what it looks like and how you present the findings for a qualitative evidence synthesis. The first example I’m showing you comes again from the same team as the previous Britten et al slide looking at medicine taking in a more extensive way. This is a conceptual model which has different types of behaviors in boxes and showing the way in which if a medicine is prescribed, different people will either take or not take the medicines as they have been prescribed by their clinician, so it kind of develops a typology of different patient groups which move beyond ideas about people simply being compliant or noncompliant with drug regimes that they’re prescribed. At the top left, there’s a box which refers to one of the typologies which they refer to as passive accepters and these are people who would accept and take their medicine without question, so this box takes an arrow down to take prescriptions and follow prescription. In traditional medical and clinical literature, this would be described as a compliant patient; they do as they’re told. Underneath the passive accepters, there’s the idea of active accepters who may accept medicine after they evaluate it. So if they are prescribed medicine, they investigate worries and concerns about the medicine that they’ve got to take and if the concerns that they have can be dealt with through getting more information or reading information sheets, then they will take the medicine and follow the prescription, but only after they’ve evaluated it. For some people, these concerns won’t be addressed by further evaluation, so they may decide to modify the regime to take it not quite as prescribed, to take less medication or to take it for not as long as they are expected to take it. So they will take the medicine, but they will not take them as prescribed. Finally, there’s a group who are rejecters who won’t take their medication at all and these people may just reject any medication prescribed for them. They may reject it after a process of evaluation or they may modify the regime.

 So this diagram tries to encapsulate a lot of very detailed information that has been built up through the synthesis and it creates a line of argument which tries to capture the experience of a lot of different studies through this development of this typology of these four groups of people who respond differently to medicine that they have been prescribed, so the passive accepters, the active accepters, the rejecters and the active modifiers. That was the new novel interpretation which contains more than the sum of its parts in terms of going beyond what was described in any one individual paper that was included in the synthesis.

 So I’m just moving on to a second example as a line of argument synthesis. This again comes from the synthesis that we did about the experience of heavy menstrual bleeding. This diagram was trying to capture why it seemed to be so difficult for women and their doctors to communicate well about the problem of heavy menstrual bleeding and what we decided from the data that was across the papers was that there was a medical disease model and a patient illness model which had very little overlap between them. This diagram which shows a large circle containing details of the symptoms that the patient illness model represented and a much smaller circle which only slightly overlaps with this patient illness model which is a medical disease model, and a medical disease model about heavy menstrual bleeding was that heavy menstrual bleeding is defined as being about a specific amount of blood loss, more than 80 milliliters. Obviously it’s quite difficult to measure that. Most women don’t have an objective idea of what their blood loss is, but for the medical disease model, the amount of blood loss is the primary defining feature of heavy menstrual bleeding. For women, the largest circle shows that they have a patient illness model about what they experience with heavy menstrual bleeding and this includes both physical symptoms, but also the impact on their life. So it includes stuff around the type of blood loss, associated symptoms, the amount of sanitary protection they need which is a kind of marker for the amount of blood loss. Whether or not their symptoms have changed over time which might make the more worried and also if they talk to other women and compare their experiences, that’s another way that they decide whether or not they think what’s going on is problematic. As well as these physical symptoms, there’s also a set of symptoms which relate to the impact on women’s lives which are important to them, so that’s around leaks, around embarrassment associated with that and the fact that it has the potential to restrict normal social, professional, familial and sexual role.

 So this diagram tried to illustrate the overall experience that women described across the papers which were included in this synthesis and this was a new model where we both described what the patient illness model was, but also interpreted this to illustrate why it was difficult for women and their doctors to agree about whether or not what the women were experiencing was actually heavy blood loss because there’s a big lack of fit between the models and this made communication problems difficult and let to the possibility of women being either undertreated for a serious problem or overtreated for something which wasn’t having a massive amount of impact. So again, we consider this to be a line of argument synthesis which tries to encompass the findings across a number of different studies.

 So in terms of the outcomes of qualitative synthesis, they might be quite different to what you expect from a systematic review and meta-analysis of quantitative data where you end up with a very tightly-defined effect size and a much more precise estimate of what the effect of an intervention might be. With a qualitative synthesis, there are a number of possibilities of useful outcomes, so given that qualitative research studies often ask very open questions, the outcomes are also varied, so you might discover that you produce a new description of a phenomenon which I think is partly what we did for the heavy menstrual bleeding program that we had a more detailed patient illness model which we described. A new concept might be developed. The creation of a new typology, so like the example I showed you from the resisting medicine synthesis where these four new categories of different responses to being prescribed medication were developed which were much more finely grained than traditional analyses of compliance versus noncompliance. We might also have a description of processes, explanations or theories or the development of strategies and I think the thematic analysis about barriers and facilitators to children’s healthy food choices started to produce strategies that might begin to overcome that by illustrating what the things that made it easier and more difficult for children to eat well actually were.

 Again, there’s a range of different tools you can use to present the findings of a quality synthesis, so there’s almost always quite a lot of textual description which describes the findings in some detail, but it’s also very useful to present tables of findings. Again, there’ve been some illustrations of these in the presentation particularly because it then shows how many studies and which studies have been translated into a particular concept, so it helps you to illustrate how much evidence there is for any particular review finding. Summary statements are also useful to say again how much, what the quality of the papers were and what the findings are, so those can be a useful way to describe the findings. Finally as we’ve seen, conceptual frameworks or diagrams can try to capture a holistic picture of what’s going on across some quite complicated syntheses and complicated ideas.

 So those are the two examples which I’m going to leave there in terms of examples of different approaches to synthesis for qualitative research and I’m just going to turn briefly now to some resources because there’s quite a lot of information on the internet which should be fully available which can give you more examples of both methods, but also examples of existing systematic reviews and syntheses that you can see. So one source of information, I’m showing a screenshot here of the Cochrane Qualitative and Implementation Methods Group and this site links both to methods, so you can have a look at the handbook which will tell you about different approaches to qualitative synthesis, but it also has a link to a Mendeley webpage which lists a lot of different examples of syntheses and so you can have a look at how other people have done syntheses. The Cochrane library has recently published its first qualitative synthesis which is about barriers and facilitators to lay health workers, and again, that you can find freely through the Cochrane website; that should be freely available. There’s a discussion list that you can join, which is called “ASQUS” and that’s part of the JISC Mail service. I’ve given the address there, ASQUS@JISCMail.ac.uk and you can just sign up by adding your email address to this list, and again, it circulates recent examples of syntheses and also people-publicized activities, their jobs or ask questions or whatever, so you can use it as a discussion board. There’s also a Twitter account for the Cochrane Qualitative Methods Group, which again tweets about examples of syntheses and other issues of interest to people who are interested in qualitative research.

 Another useful site where there’s some information about approaches to review and synthesis is the EPPI-Centre site. This is the group that produced that “Barriers and Facilitators to Children’s Healthy Eating” report we discussed earlier and that report is available from this website. They’re involved in quite a lot of other evidence syntheses and there’s quite a lot of information about different methods for evidence synthesis. They also have some software available for managing a systematic review process which you can get hold of from them.

 The one missing slide that I have is, just to mention, in the near future there will be a paper about a new tool called “CERQual," which is about certainty in qualitative evidence synthesis and that shows a tool to help policymakers work out how robust and extensive the evidence supporting any review finding might be, and so that looks at things like how much evidence is there, what’s the quality of that evidence, how coherent is the evidence base and how relevant is it to the policymaker’s question, so look out for that. It’s called CERQual and there’ll be a paper about that soon.

 Finally, just for your information, there’re some References here. Again, some examples of syntheses and some methods papers which describe how to go about doing the synthesis. So thank you very much for listening. My contact details there, I hope it’s been useful.

Joann Starks: Well, thank you very much, Ruth, for a very informative presentation. I want to thank everyone for participating today. We hope you found the session to be interesting and helpful and that you will join us for the next and final webinar in this series that will address combining quantitative and qualitative evidence. Here on the last slide is also a link to a brief evaluation form and we would really appreciate your input. We’ll also be sending an email with the link for the evaluation to everyone who registered. We do invite you to give us your input about today’s session, ideas for future sessions and to participate in the community of practice to help us continue the dialog. You can contact me at the email address there, joann.starks@air.org

 So on this final note, I would like to conclude today’s webinar with another big thank you to our speaker, Ruth Garside, from myself, Ann Williams and all of the staff at the Center on KTDRR. We appreciate the support from neither to carry out the webinars and our other activities. We look forward to your participation in the next session. Good afternoon.

- End of Recording -