

Big Qualitative Diary Data: Transcript



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Laura Radcliffe: Hi everyone, we are here to talk about big qualitative diary data. My name is Laura Radcliffe, I'm a reader in organisational behaviour at the University of Liverpool Management School.

Leighann Spencer: And I'm Dr Leighann Spencer, I'm a senior lecturer at the University of Liverpool Management School.

Laura Radcliffe: And we both have quite a passion for qualitative diary method.

Tell us about the types of big data you work with and what challenges does it pose? Well, as we've just mentioned, we use qualitative diaries quite a lot as our data collection method and this involves a whole range of approaches. It could be written diaries, it could be audio recorded diary data, which we'd then transcribe, it can be, even include visuals like photo diaries, and some people use video diaries as well. We've used app diaries too, which allow you to move between different modes. And also, as you can imagine, this kind of big, well, we term it big qualitative data, there is obviously a discussion about what is big data, what does that even mean? And we would say that qualitative diary data, even if you haven't necessarily got data from, you know, we're not talking hundreds of participants here. When you've got diary data, if you've got a participant keeping diary for you over a few weeks even and you've got 30 participants, that's a lot of data. So, we would argue that diary data, qualitative diary data, is usually big data. And what challenges does it pose, Leighann?

Leighann Spencer: Well, it's just a lot of data. So, it takes a very long time to analyse it, to keep track of each participant when you have multiple days of data or weeks of data. So, keeping track of everything, retaining an individual focus when your research question demands it can be quite difficult because you want to make sort of sample comparisons, but also stay true to that individual's experience. So that can be difficult. And then, of course, combining different types of data in a sort of integrated analytical process. So, as you mentioned, you can have photo data, written data, audio data, how do you combine all of that? That can be a bit of a challenge in the context of diaries.

Laura Radcliffe: Yeah, it takes a lot of data management even before you start the actual analysis process, but it is great data and it's really important data that allows you to investigate things that you couldn't with other methods.

So, what's your approach to analysing big qualitative data and what does it allow you to do?

Leighann Spencer: Okay. So obviously we focus on or we heavily use qualitative diaries in our research. So, I think we should talk a little bit about how we analyse qualitative diary data because, as both of us have experienced, because it is a different kind of data and, as we mentioned, the volume is quite large when you use this diary data. So, we have developed two diary specific analytical approaches. So, I tend to be interested in processes, so how participants or individuals experience particular things over time. So, we developed thematic trajectory analysis, which is an approach that allows you to see how thematic content changes over time through the development of visual trajectories.

So, what this allows you to do is to see how participants' experiences and responses to particular things change over time through visualising data in this way. And then, of course, Laura, you have event diagram analysis, EDA, as we're calling it.

Laura Radcliffe: Yeah, that's where we kind of started with things, because I think we should probably briefly say that two of the key benefits of using qualitative diaries. First of all, the first benefit, which I began using diaries to look at, is that you can get a lot of rich data in the moment. So, we call this the down benefit, the rich in-depth understanding of how things connect in the moment rather than participants reflecting back in an interview, for example. It's a more messy data because it's that in the moment what's happening and it's not quite all organised yet. And so, for that, we needed a method where you can track what's happening in the moment and how one thing connects to another. And so, we looked at event diagram analysis, what we're calling EDA, to look at that. But then when it came to Leighann's research, which was looking at change over time, we needed yet another step because that, and that's the other benefit of qualitative diary methods, is that they can track within person change over time. So, I think that's really important as well.

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So, we have these two approaches, but really in TTA, in thematic trajectory analysis, it's kind of embedded EDA in there where we have micro templates. Leighann, I don't know if you want to come in there quickly?

Leighann Spencer: Yes, so these micro templates, so Laura's emphasis on how do things link across a given day or time period, and then thematic trajectory analysis takes us further and says, "Okay, well, what are the linkages across time?" So, these micro templates, essentially you treat every sort of unit of your diary. So, if you have participants keeping daily diaries, then you would have a template for each day. And essentially what this is is both of these approaches, when we were developing, when we were working with qualitative diary data, we quickly realised that traditional qualitative analysis methods just don't appreciate the complexities of diary data, particularly across those sort of down and across focuses or benefits that qualitative diaries give you.

So, these two approaches, which we discuss at length in a book that we have coming out in the spring on qualitative diaries, give us sort of real deep dive into these two different approaches.

So yeah, what are our approaches to analysing big qualitative data? Two approaches that we had to develop because we just couldn't make things work with existing approaches.

Laura Radcliffe: And we'll put the paper, the TTA paper, as a reference at the end of the slide as well.

Okay, what are the limitations of your approach? I think we'll definitely be saying that the main limitation is just the extent of time that, yeah, it takes a great deal of time to do this. And obviously, it's very suitable for a PhD, for example, which is where we used Leighann's PhD and this is when this developed and when Leighann really used TTA. And we've used it in part since, but in busy academic jobs it's not always feasible to spend as much time as you would like, especially if you've got a lot of diary data. I think that would be the main limitation. We've not incorporated the visual into this analysis approach yet, but we think this could be done, don't we?

Leighann Spencer: Definitely. I'm sure we'll have a brilliant PhD student who comes up with an approach to do so. But yeah, I'd certainly say the limitations of certainly thematic trajectory analysis is it just takes a long time because it's allowing you to take qualitative data a step further and that step necessitates additional time.

I would also say, because of how the method works, again, it will be provided in the paper that Laura posts with this, but it is also in many ways, I think, on reflection, probably more of a methodology than just an analytical approach in that it does inform the research question and how you collect the data. It can be applied to different types, like you could have existing diary data that you then use with this method, but it's just going to take a little bit more work. But as they say, nothing good comes easily. So definitely

worth checking out, even if you haven't used it to plan the methodology from the start.

Laura Radcliffe: Okay, and finally, we now have the opportunity to ask a question that we're grappling with that we would love for other people to think about. So, I think having discussed this in a great deal of length, myself and Leighann, we are wondering how, if or how, can analysis of big qualitative diary data in particular be supported or made faster by some form of support from potentially NLP, natural language processing, or other form of AI support, importantly, in a way that retains the context of each individual's story, as well as allowing for tracking that each individual's change over time.

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So important element again of direct poll diary data is that you can capture that within person change over time. So how might AI help us to do this more readily so that we can work with bigger samples of qualitative data more, make it more feasible?

And also, what are the associated ethical issues of doing so? And I guess could TTA be, you know, could an AI enhanced supported version of TTA, of thematic trajectory analysis, be created for qual diary data? Yeah, that would be wonderful.

Leighann Spencer: It certainly would. And I think as well, I mean, there's research coming out looking at AI assisted qualitative research and I think it's just, although we are interested in these approaches, I think Laura and I would both agree we're not saying AI should replace the qualitative researcher, but more of a friendly research assistant.

Laura Radcliffe: Definitely, it's important to us that you keep that kind of, you're understanding that data in-depth, you're understanding the context of that data. But perhaps some way to speed up those within TTA, we have different levels of templates. So micro templates, miso templates, macro templates, that takes a lot of time as well. Could that be sped up once we

have our initial template? Could those trajectories that we then create, so we track how themes change over time, could that be supported through AI to speed up the process rather than taking it away from the analysis of the researcher? So that's a rather complicated question, I think.

Leighann Spencer: And I think even, so, I mean, when I started my research with Laura, we had developed an app, a diary-based app, and I think now, with the advent of AI, creating apps is far more accessible and easier. So, is there a way that participants that we can create data collection apps, but also with this integrated analytical power and through the use of thematic trajectories, can participants have a sort of tool that reflects their data back to them for reflection on their experiences? So, I think there is loads of potential and it would be great to see what other people think about this.

Laura Radcliffe: And that's it from us. Thank you for listening, everyone, and we are looking forward to talking more about the important topic of big qualitative data.

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