**WEB-BASED DIARY STUDIES**

by Simon Moss

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| **Introduction** |

 Two problems limit many qualitative techniques, such as interviews. First, individuals tend to participate and answer questions at one time or sometimes two or three times. These techniques, therefore, may not accurately characterize how experiences or events change over time. That is, people like to perceive themselves as consistent—and, therefore, might not disclose the extent to which their attitudes, beliefs, or behaviours varied over time.

 Second, some individuals do not verbalize their experiences articulately and accurately. People diagnosed with autism spectrum disorder, for example, might prefer to write, rather than articulate, their concerns and perspectives. Thus, researchers occasionally administer diary methods to overcome these limitations. For example, they might invite people diagnosed with autism spectrum disorder to maintain a diary of their main concerns in the workplace.

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| **Benefits and drawbacks of diary studies**  |

 To decide whether to conduct a diary study, you need to consider the benefits and drawbacks of this approach. The following table summarizes these benefits and drawbacks

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| Benefits of diaries studies over interviews and other common techniques | Drawbacks of diaries studies over interviews and other common techniques |
| **Immediacy.** Diaries studies can record experiences and circumstances that change over time, without the need to depend heavily on memory—memory that could be inaccurate and biased | **Overlooks nonverbal cues.** Relative to interviews, the data do not include nonverbal cues, such as tone of voice |
| **Time to contemplate.** This method grants people the time to contemplate their answers—and, thus, is not limited to the most immediate and salient responses of participants. Answers that evolve over time are often more representative of experience (Dijksterhuis & van Olden, 2006) | **Record only pleasant experiences.** Without prompts, participants might shift their attention to pleasant, rather than unpleasant, memories or events. Consequently, diary studies might overlook significant information  |
| **Determine sequence**. Diary studies enable researcher to clarify the sequence of events more effectively (e.g., Glick et al., 2013) to differentiate the cause and effect  | Participants might not be motivated to maintain informative diaries |
| **Clarifies the context.** Diary studies enable researchers to appreciate the precise circumstances in which various events unfolded (Mechanic, 1989). During interviews, participants might not remember the precise circumstances as well.  |  |
| **Greater disclosure.** Because diary studies feel more anonymous, participants might disclose more sensitive material. Anonymity can foster more creativity as well (Steidle & Werth, 2013).  |  |
| **Empowerment.** This method enables participants to choose which experiences to record, empowering these individuals. This sense of empowerment might diminish the tendency of participants to skew their responses to please the researchers. |  |

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| **Kinds of diaries**  |

 The procedure that researchers utilize depend on the kind of diary research they want to conduct. In his seminal work, Allport (1942) differentiated three kinds of diaries in research. In particular, diaries include

* **a research log**: A person, usually the researcher, merely catalogues activities and reflections
* **an unsolicited intimate diary**: The participants supply the researcher with a diary they had written previously, before the research started
* **a research driven diary**: The researcher invites participants to record a diary about a specific range of activities or thoughts.

This document primarily revolves around research driven diaries. To complete some research driven diaries, participants answer numerical questions, such as “To what extent do you feel happy on a scale of 1 to 10”. To complete other research driven diaries, participants answer questions with words, such as “How do you feel before you meet an unfamiliar person”. So, these diaries can generate quantitative or qualitative data.

**Platforms to constructs diaries**

Besides this distinction between quantitative and qualitative approaches, diaries also vary on the media that is used to construct diaries. In the past, participants recorded their diaries on traditional paper. Then, a couple of decades ago, researchers began to use electronic devices, such as personal digital assistants. Finally, more recently, many web applications have been developed to facilitate diary studies. The following table presents some of the benefits and drawbacks of each alternative.

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| Paper diaries | Electronic diary devices  | Web-based diaries |
| Benefits |  |  |
| Feels more natural to some participants | Feels private, because no other people, besides the researchers, can access the entries  | Includes the benefits of electronic devices |
| May be becessary if electricity or internet access is limited | Entries are assigned a time and date stamp—and hence the time can be verified | Data can be retrieved from the cloud immediately (Hookway, 2008) |
|  |  | Most participants can already access the web—and, hence, no equipment needs to be purchased |
| Drawbacks (Bass et al, 2007) |  |  |
| Researchers cannot ascertain whether participants completed he entries on time | May be expensive to purchase or replace | Demands uninterrupted internet access  |
| Participants might have modified previous entries | Limited battery power can diminish the amount of data recorded |  |
| The rate of completion and satisfaction is limited | The data may need to be downloaded or transferred to the researchers somehow  |  |
| Participants feel more accountable, diminishing honesty |  |  |

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| **How to conduct a web-based diary study**  |

 To conduct web-based diary studies, researchers often implement a range of activities. The following table summarizes some of these activities.

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|  Procedure | Details  |
| Clarify the research question | Typically, diary studies are conducted to understand the lived experience of interesting people—people with a distinct characteristic or living in a distinct circumstance. Examples might include* the extent to which people with a specific disorder feel supported
* the circumstances in which individuals are most inclined to initiate unhealthy behavior (e.g., Kypri et al., 2007)
* the impact of time, settings, and circumstances on the symptoms that people experience (e.g., Kim, E. S. et al., 2014)
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| Clarify the duration of this study | According to some researchers, participants should maintain this diary for about one month (e.g., Symon, 2004). That is* If this time was shorter, participants might not be granted enough time to familiarize themselves with this task, impeding their diary entries
* If this time was longer, the engagement of participants might diminish, potentially decreasing the veracity of their entries.
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| Develop the platform to seek and record diary entries | To conduct these web-based diaries, you could consider a range of alternatives. For example* You could use the Journals tool in Learnline or Blackboard. You might need assistance, however, to set up Learnline or Blackboard accounts for people outside CDU
* Survalytics is open source software that can be used for this purpose: see mhealth.jmir.org/2016/2/e46/
* <https://app.expimetrics.com> is about $1200 if you want to track participants and potentially free otherwise
* [www.psychdata.com/default.asp](http://www.psychdata.com/default.asp) is relatively inexpensive, at about $35 a month
* <https://www.otago.ac.nz/psychology/otago047475.pdf> presents a catalogue of other possibilities
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| Ethics  | Besides the usual plain language statement, diary studies could raise some other ethical considerations. To illustrate* you need to remind participants to be cautious, such as log out if using a public computer
* you need to inform participants of whether their entries are anonymous
* sometimes, you could inform participants their entries are anonymous, but you will be able to determine each time they record an entry
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| Guide participants on which information to record (see Bryman, 2012) | Researchers often utilize a semi-structured diary schedule in which they utilize broad questions to prompt their participants but do not restrict individuals to these questions. They might invite participants to record* a specific kind of experiences, such as times when they felt that support was inadequate.
* a sequence of these events, circumstances, or activities
* the setting, such as people in the surroundings
* their thoughts and feelings before, during, and after key events
* the insights they gained from this event—and how they might behave differently in the future
* any other experiences they would like to record
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| Include prompts or examples to assist participants  | To help participants, you could supply* a checklist of tasks
* a few short examples
* automated gratitude after each entry
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| Send reminders | If participants had not completed the requisite entries, they can receive reminders.  |
| Analyse the data | * For quantitative data, time series analyses are common
* For qualitative data, a variety of methodologies, such as interpretative phenomenological analysis or thematic analysis are common
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| **References**  |

Allport, G. (1942). The use of personal documents in psychological science. New York: Social Science Research Council.

Bass, B. L. et al. (2007). Evaluating PDAs for data collection in family research with non-professional couples. Community Work and Family, 10, 57-74.

Brown, N., Williams, R., Barker, E., Galambos, N., Belli, Robert F., Conrad, Frederick G., & Wright, Daniel B. (2007). Estimating frequencies of emotions and actions: A web‐based diary study. Applied Cognitive Psychology, 21(2), 259-276.

Bryman, A. (2012). Social research methods (4th ed). Oxford: Oxford University Press

Connelly, N., Lauber, T., Niederdeppe, J., & Knuth, B. (2018). Using a web‐based diary method to estimate risks and benefits from fish consumption. Risk Analysis, 38(6), 1116-1127.

Dijksterhuis, A., & van Olden, Z. (2006). On the benefits of thinking unconsciously: Unconscious thought can increase post-choice satisfaction. Journal of Experimental Social Psychology, 42, 627-631

Glick, S., Winer, N., & Golden, R. (2013). Web-Based sex diaries and young adult men who have sex with men: assessing feasibility, reactivity, and data agreement. Archives of Sexual Behavior, 42(7), 1327-1335.

Hookway, N. (2008). Entering the blogosphere: Some strategies for using blogs in social research. Qualitative Research, 8, 91-113.

Kim, E. S. et al (2014). Development of a Web-based, self-reporting symptom diary for Crohn's Disease, and its correlation with the Crohn's Disease Activity Index: Web-based, self-reporting symptom diary for Crohn's Disease: Journal of Crohn's and Colitis, 11(12), 1449-1455.

Kypri, K., Paschall, M., Maclennan, B., & Langley, J. (2007). Intoxication by drinking location: A web-based diary study in a New Zealand university community. Addictive Behaviors, 32(11), 2586-2596.

McDonald, Leanne, Glen, Fiona C., Taylor, Deanna J., & Crabb, David P. (2017). Self-Monitoring Symptoms in Glaucoma: A Feasibility Study of a Web-Based Diary Tool. Journal of Ophthalmology.

Mechanic, D. (1989). Theory, method and substance. Journal of Health and Social Behavior, 30, 147-160.

Petersson, C., Björkander, J., & Fust, R. (2018). Discovering aspects of health—experiences of a web‐based health diary among adults with primary immunodeficiency. Nursing Open, 5(4), 642-648.

Steidle, A., & Werth, L. (2013). Freedom from constraints: Darkness and dim illumination promote creativity. Journal of Environmental Psychology, 35, 67-80. doi: 10.1016/j.jenvp.2013.05.003

Symon, G. (2004). Qualitative research diaries. In C. Cassell & G Symon (Eds.), Essential guide to qualitative methods in organizational research (pp. 98-113). London: Sage.