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Embracing the Visual: Using Timelines with In-depth Interviews on Substance Use and Treatment

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People typically seek treatment for addiction only when faced with a major crisis. Understanding the trajectory of substance use and treatment seeking may assist in identifying points for intervention. In this study I explored the use of visual methods with in-depth interviews to represent people's substance use, critical events, and treatment pathways. Ethics approval was granted with the condition that only aggregate findings would be presented, although occasional quotes could be used for illustration. Typical timelines were developed, along with text vignettes describing hypothetical participants whose experience matched that shown in these timelines. Benefits of the timelines include the combination of aural and visual data, along with the concise and holistic form of presentation. However, the use of typical timelines and hypothetical vignettes meant a loss of the richness found in individual portrayals of experience. Alternative approaches, such as the use of individual and summary timelines with text illustrations would preserve the conciseness of representation while enabling the voice of the participant to be heard.
Key Words: Alcohol and Drugs, Addiction, Visual Methods, and Lifelines

In-depth interviews aim to elicit stories of experience, generating authentic accounts that are the product of the empathetic relationship that is developed between interviewee and interviewer (Silverman, 2001). This approach supports the exploration of perception and experience, with the goal of describing and explaining what has occurred from the participant's viewpoint. The context for the interview and the participant's capacity to recall what has occurred may have substantial impact. Visual methods are one way to enhance the quality of the information obtained and they may offer benefits for analysis and presentation (Harper, 2002).

In this article, the benefits and challenges of using timelines with in-depth interviews are explored. This approach was applied in a study involving people that have experienced substance abuse and issues pertaining to data reduction and presentation have been considered.

In-depth Interviews and Visual Representation

Participants provide a representation of self during in-depth interviews; taking part in a performative exchange rather than merely providing a factual account of their experiences (Butler, 1997; Schwandt, 2007). Within this framework, interview questions have been conceptualised as "instances of power" where the interviewer controls the orientation, focus and sequence of the narrative (Butler). Further, the narratives provided may not be "records of facts, of how things actually were, but of a meaning-making

system that makes sense out of the chaotic mass of perceptions and experiences of a life" (Josselson, 1995, p. 83, cited in Ezzy, 2002, p. 100). This may be particularly true when the focus of exploration is complex and involves sensitive areas of inquiry such as alcohol and drug abuse and treatment.

Visual imagery has a long history in social research, providing media that enable the vivid depiction of events (Harper, 2002). Photographs, drawings, film, and maps enhance inquiry and illustrate participant perspectives (de Lange, Mitchell, & Stuart, 2007; Rhodes & Fitzgerald, 2006). These forms of data increase the quality of representation by providing a bridge between experience and recall; they constitute "ways of forging connections between human existence and visual perception" (Denzin & Lincoln, 2003, p. 51). While neither interview nor visual methods provide a simple representation of fact, combining these techniques may be beneficial. Despite this potential, qualitative research relies strongly on the interview and subsequent analysis of transcripts. This focus, "leads to an over-reliance on words as a means of generating description of behaviours and contexts and their related symbolic meanings, when visual data may do this at least as well" (Rhodes & Fitzgerald, p. 349).

There are particular advantages in combining visual and interview methods. Visual methods enhance the accuracy and completeness of the information that is conveyed (Denzin & Lincoln, 2003; Gramling & Carr, 2004) and there is scope to capture hidden meanings and complex ideas that may be difficult to express in words (Rhodes & Fitzgerald, 2006). There is potential to uncover previously unknown or unconsidered dimensions of the area under study, while provoking the (re)-consideration of analytical categories which may be taken for granted (Banks, 2007). Data triangulation across interview text and visual imagery is also possible (Piercy & Benson, 2007).

Timelines

Timelines, or lifelines, are one approach to visual representation that has been used in combination with interviews. Timelines are a visual depiction of a life history, where events are displayed in chronological order. The significance and meaning attached to events may also be shown. Timelines facilitate recollection and sequencing of personal events and they are useful for comparison with other data, to confirm and complete a life history or place a particular research construct or clinical problem in the context of other events (Gramling & Carr, 2004).

Timelines are sometimes used as a therapeutic tool, providing a focus for reflection and decision-making. For example, Bryant-Jeffries (2001) describes a person-centred approach to counselling for alcohol problems where the client may be asked to draw a lifeline. At a point just ahead of the present, the lifeline includes a fork. One line continues straight on and represents continued drinking while the other branches upwards and represents change in drinking behaviour. Possibilities are then plotted against these two lines, helping the client to gain a picture of the effects of change. The representation provides an overview that can help clients make an informed choice. It focuses the therapeutic encounter on the client's understanding of his / her situation; "it often helps in bringing the client's reality into the therapeutic setting" (Bryant-Jeffries, p. 108). Although under-utilised, this technique offers important insights for research (Harris &

Huntington, 2001). As with therapeutic applications, there is an opportunity for participants to represent their own version of reality while reflecting on the significance of individual events and the relationships between these events.

There is also evidence that timelines facilitate data management and enable insightful analysis. An exploration of the experiences of African American women who smoke crack involved a random sample of 25 interviews from a total of 208. Timelines were constructed from these 25 interviews. Major events were coded on the timelines, such as incest and rape, births, deaths, drug use, and mental illness (Boyd, Hill, Holmes, & Purnell, 1998). Analysis of these data focused on the quantity of events within each five-year period, events that post-dated sexual trauma, the timing of drug use and the events that preceded changes in drug use. The authors concluded that "after years of reporting on crack users in aggregate, this life-line analysis provided a new perspective on crack abusing women"; by characterising drug use, particularly crack, in the context of other life events (Boyd et al., pp. 239-240). The analytic method enabled a holistic perspective on the women's experiences and the identification of commonalities in the relationships between particular events and patterns of drug use.

Data Presentation

Visual images are useful tools for presentation; potent ways to communicate ideas to others. Displays are constructed on the basis of consolidated patterns in the data and the impact of underlying factors, such as time, location, or choice can be represented (Denzin & Lincoln, 2003). These displays can incorporate a descriptive element (e.g., what happened, how participants felt) as well as an interpretive component (e.g., causal relationships between separate events). Through attention to design, along with accuracy in representation, there is an opportunity to provide concise, holistic summaries of participant accounts of their experience. In addition, it is possible to focus the reader's attention on key findings and conclusions (Becker, 2007). In one example, computer generated timeline diagrams were developed following interviews exploring infection avoidance among injecting drug users (Friedman, Mateu-Gelabert, Sandoval, Hagan, & Des Jarlais, 2008). These diagrams show categories of experience by time (e.g., living arrangements, memorable events, sex, and treatment) and individual experiences (such as "mother remarries" or "injecting heroin") are highlighted in the body of the diagram. In this way a good deal of information is shown within the thematic framework

There are obvious challenges in representing life stories in an abbreviated and codified way. In the study on women who smoke crack, all 25 timelines were presented, as they were felt to be "open to varying interpretation". Further, simply quantifying the data risked not "telling the story", or not the whole story (Boyd et al., 1998, p. 239). This may be emblematic of the complexities in using visual data, particularly the interpretive phase of analysis that highlights the difference between what is seen and what is described. This interpretive phase is critical to qualitative work. Nevertheless, it may stem from (and contribute to) the "ambiguous – even unscientific – status" of visual data in social research (Rhodes & Fitzgerald, 2006, p. 359).

An Exploration of Substance use and Treatment Pathways

Method

In the current study I aimed to explore pathways to treatment using in-depth interviews and timelines; seeking to capture consumer perspectives on drug use and treatment. The current project is part of a review of Victoria's alcohol and drug treatment service system, which I co-ordinated. The review included four programs of research in addition to the current work and aimed to provide policy direction for the efficient use of available resources (cf., Ritter, Berends, Clemens, Devaney, Richards, Bowen, et al., 2003).

I led the research, being responsible for design, oversight and analysis, and a research assistant conducted the interviews. My background is in community psychology and my area of study is health systems, with a particular focus on treatment responses to people with substance use problems. The research assistant was experienced in conducting quantitative interviews involving drug users and I provided training on the semi-structured format used in this study and the goals for and approach to be used in completing the timelines. While the research was being conducted I provided the research assistant with regular supervision and she attended a peer supervision session involving others who were undertaking interviews of a similar nature.

We placed posters in a range of services around the state and interested people were invited to call the researcher or arrange to be at the service when the researcher was on site. Participants received $20 compensation for their contribution. The study proposal received approval from a National Health and Medical Research Council Ethics Committee. Participants were provided with a written participant information sheet and the study was explained, after which they were asked to sign a consent form. Participant confidentiality was protected by the presentation of substance use and treatment pathways in aggregate form.

The interviews included the collection of demographics, information on types and extent of drug use, and a measure of drug dependence. A semi-structured interview guide comprised questions on drug use and treatment history, focusing particularly on first and most recent experiences. The researcher and participant also completed a timeline, which was about the participant's history of substance use and treatment seeking, from the onset of use to the present day. The timelines tool was an A4 sheet with a horizontal axis where drug use was plotted above the line and treatment experiences below the line. One hundred and twelve people were involved in the study. The majority was male and aged in their late 20s to mid-30s. More than half were dependent on drugs and involved in treatment. Around one-third was substance dependent but not in treatment and a small group reported having resolved their drug dependence.

We transcribed the interviews and analysed the transcripts using a thematic approach (see Berends & Johnston, 2005, for details). The text and timelines data were placed into categories based on the recent main drug used by participants, so that treatment pathways and experiences could be explored on this basis. During analysis, we compared the timelines information with text data to fill gaps and identify major discrepancies in the drug use and treatment experiences reported by participants. Next, we plotted recurrent themes (from the text and timeline data) onto "typical timelines", to

show common elements of substance use and treatment pathways among the study group. These themes were largely descriptive and included the age at which drug use commenced, types and quantities of drugs used, and treatment modalities experienced. In the final stage of analysis, we constructed hypothetical vignettes based on the typical timelines that also drew from the thematic analysis of text data.

Findings for People Whose Main Recent Drug is Alcohol

Examples in the current paper are taken from timelines and interviews with 28 people in the study who identified alcohol as their recent main drug. Figure 1 provides a typical timeline, which shows dominant themes in these data.

Figure 1. Typical timeline for participants whose recent main drug is alcohol

Drug use	Most participants have their first drink in their early teens.	Daily and/or binge drinking occurs by the time they reach 18-20 years. Polydrug use is common and some participants develop a heroin addiction.			
Median age (range)	14 (8 to 20)	19 (15 to 38)	34 (18 to 50)	38……..	……..53
Treatment seeking		A minority seek treatment, usually residential withdrawal. Some are receiving treatment for their heroin addiction. Most do not seek treatment in relation to alcohol dependence. One person resolves their problem.	There is an increased rate of treatment seeking among participants. The most common form of treatment experienced is residential withdrawal. Some participants are prescribed antabuse.	Some participants experience treatment for the first time during their late 30s to early 40s. One person resolves their problem.	At the time of the interviews, participants have experienced an average of four treatment episodes. Thirteen participants are in treatment, 11 are not in treatment and they have problematic use, and three have resolved their drug problem.

This group generally started drinking in their early teens. Binge drinking was a feature of some people's experience in their late teens and early twenties. Polydrug use was common at this time. Alcohol was typically used throughout. Treatment involved specialist alcohol and other drug (AOD) programs (e.g., detoxification) and included substitution therapy that usually occurred when people were in their mid-30s. In general, as participants became older there was more engagement with treatment, although this was episodic rather than involving a continuum of care. Treatment engagement typically occurred after ten to 15 years of substantial alcohol use. After more than three decades

almost half of the group are not in treatment although they recognise that their alcohol use is problematic.

These findings portray the trajectory of alcohol use and treatment seeking, illustrating the chronic nature of addiction and the limited contact with services. It is possible to reflect on points for intervention, in the form of treatment retention or harm reduction strategies. For individuals with long experience of alcohol addiction, it is likely that health concerns will emerge in the near future.

One limitation in using the typical timeline is the loss of richness and depth possible in individual accounts of experience. In an effort to counter this effect, findings have been re-presented in the form of a hypothetical vignette, as shown below.

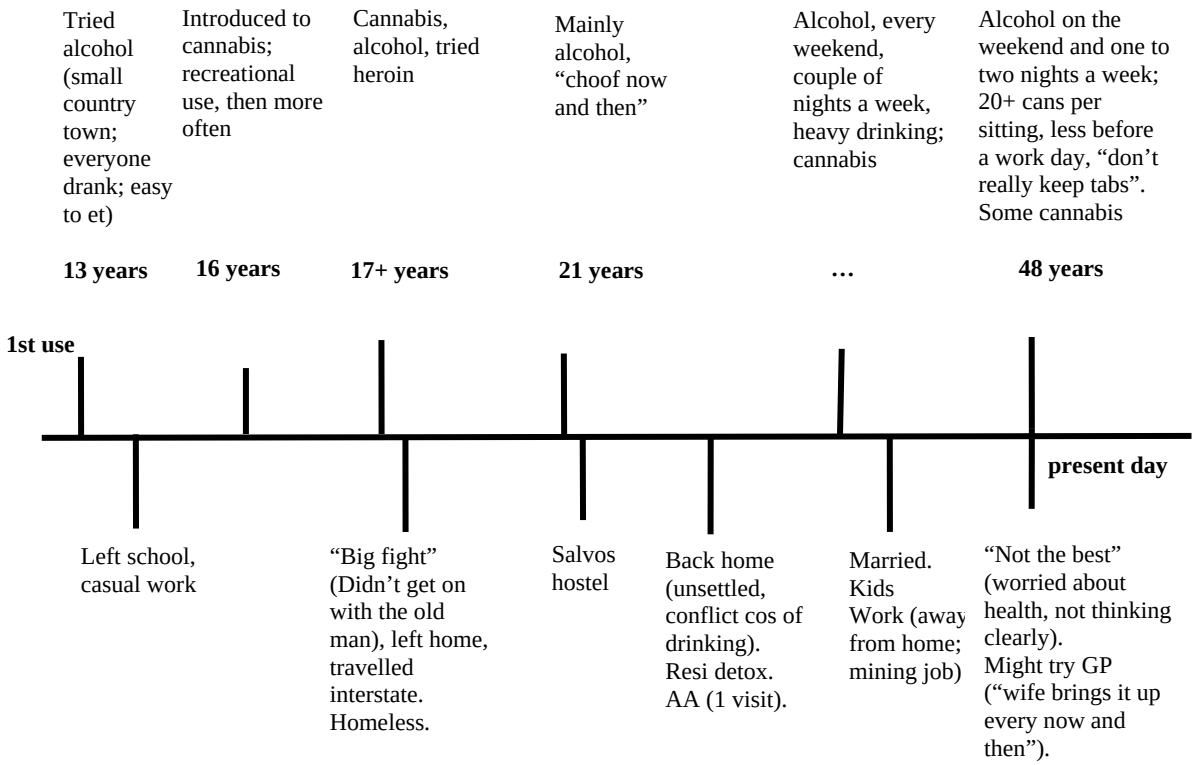
> Dale is in his late 30s and he lives in Melbourne. Alcohol has always been his drug of choice and his problem drug. He started drinking at 15 years, usually on the weekend and at friends' parties or social gatherings. At 20 years Dale's drinking escalated and he started drinking every few days, sometimes involving three to four stubbies and sometimes more than he likes to remember. Just recently, Dale lost his job and his drinking escalated again, involving daily consumption of large amounts. His health started to slide and he was getting the shakes. Dale recognised that he had to do something about his drinking and he spoke to his general practitioner (GP) about it. Dale was put on antabuse and that has helped to stabilise him. The craving hasn't gone away though and he recently heard from a friend about the benefits of going to alcoholics anonymous (AA). Dale has since been to one session and he plans to go back.

Within this vignette, the impact of major events such as job loss and health concerns is clear. In addition, Dale is portrayed as being active in the treatment pathway and it is possible to identify opportunities for intervention, such as Dale's friend and his GP.

The vignette clearly facilitates the presentation of findings at a "person" level. Experiences other than substance use and treatment are shown as well as the relationship between particular events. Using the vignette in combination with the visual summary of timeline findings goes some way to addressing Rhodes and Fitzgerald's (2006) point about the over-reliance on text in research. The conditions under which ethics approval was obtained for the current study precluded the presentation of individual timelines, however if permissible then typical and individual timelines could be used in combination with supporting text. To illustrate the potential benefits of this approach, a hypothetical timeline has been constructed (refer to Figure 2).

This timeline shows a history of substance use that spans more than 30 years. Alcohol is the dominant drug through these years, although cannabis use also features. This person has engaged with the treatment system intermittently although he is not currently in treatment. The GP is an entry point for treatment that may be taken up in the future. There was an early period of crisis in this person's life, involving family conflict and homelessness although over time life appears to have become more stable, as indicated by marriage, children, and employment. There are a number of areas for further exploration, such as the prevalence of alcohol use in the small rural community and the relevance of working away from home in relation to alcohol consumption.

Figure 2. Timeline showing substance use and treatment seeking for someone whose recent main drug is alcohol



Challenges, Benefits, and Directions

Consistent with past work, the typical timeline was a useful mechanism to represent large amounts of data, while highlighting the impact of underlying factors such as time (Becker, 2007; Denzin & Lincoln, 2003) and the relationships between discrete events (Ezzy, 2002). There was also no risk that participant confidentiality would be compromised through this approach. The vignettes built on the typical timelines and reconstituted personal elements of life experiences that added richness to the portrayal of findings.

However, this form of representation had substantial drawbacks. In a sense, the reader was precluded from reflecting on the interpretations made in data analysis and alternative ways of conceptualising the meanings shown. The use of individual timelines would address this shortcoming. Using timelines and text vignettes based on individual experiences may create a more comprehensive, in-depth account with scope to incorporate feelings and reflections expressed by participants. Using a small number of pertinent quotes to illustrate critical events may ensure the participant's voice is not lost. Combining typical with individual timelines would address multiple needs. Showing a single person's experience alongside the representation of many people's experiences would demand "that the general reveal itself in the specific", providing a strong perspective on life as it is lived by those contributing to the study (Banks, 2007, p. 120).

Another approach worth consideration involves the development of an artistic representation which captures the richness of people's journeys. However, there are concerns that creating an image is at odds with the need to provide a 'true' representation of the data. Similarly, Crinall (2009) described the difficulties she experienced in having created a 'staged' photograph with a homeless mother and child. She held concerns that this act was a contamination of the truth and seemingly unethical. On reflection, however, Crinall regarded the production of an image as part of the research exercise; a strategy that can advance our capacity to make sense of information. An artistic expression of the information would recapture the visual element and aim to convey the complexity and chaos of participants' life experiences, thereby moving beyond description to knowledge construction. This representation may be transformative for the audience as they see beyond the "facts" to the depth and significance of people's experiences (Sullivan, 2005).

In this study, using timelines in combination with in-depth interviews increased data quality, consistent with other research. This method should be considered in work that seeks a comprehensive and in-depth account of people's perception and experience. While allowing a concise summary of findings, reducing the data to present typical timelines meant a rich account of individual experiences was only possible by returning to a text format. It would be preferable to provide case examples in timeline format. Generalities drawn about participant experiences should be reflected in individual journeys, to provide the richness of information possible at this level while capitalising on the power of the visual form. Consideration may also be given to an artistic representation of the trends shown in typical timelines, to provide a transformative representation of the significance behind particular events and their association with changes in patterns of substance use.

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