Designing a mixed methods longitudinal study: the Longitudinal study of Ageing in a Retirement Community (LARC)

Bernadette Bartlam1, Jennifer Liddle1, Miriam Bernard1, Thomas Scharf2 and Julius Sim1
1Centre for Social Gerontology, Keele University, UK; 2Irish Centre for Social Gerontology, NUI, Galway.

b.bartlam@keele.ac.uk: www.keele.ac.uk/larc

OBJECTIVES
To identify key issues encountered in developing a longitudinal, mixed-methods study and to outline implications for future such research in ageing.

DEFINITIONS
Longitudinal methods
Longitudinal research can refer to any data generation examining change over time. In providing such data which are not available from other types of investigation, such research is particularly suited to:
• Tracking causal links
• Measuring change over time
• Exploring the complex nexus between biography, current lives and anticipated futures (Ruspini, 2002)

Mixed methods
Mixed methods can address complex issues for which neither a wholly quantitative nor a wholly qualitative approach will suffice. This approach is seen as a spectrum, with the degree of mixing being dependent on the research question(s) (BurkeJohnson,Onwuegbuzie & Turner, 2007).

LARC
“A strong mixed methods study starts with a strong mixed methods research question or objective” (Tashakkori and Creswell, 2007:207). In line with this, the research objective of LARC is to understand the psycho-social and health impacts associated with ageing in a purpose-built retirement community, in this case Denham Garden Village in Bucks., UK. This objective subsumes questions such as:
• What are the socio-demographic, economic, social and health status characteristics of residents, and how do these change over time?
• What are the health and care needs of residents and to what extent do services meet these?
• What are the implications of the DGV model in the wider market of accommodation and care options for older people?

METHODOLOGY & METHODS
The methodological approach adopted in LARC is rooted in a critical gerontology perspective, which holds that perceptions and value commitments affect all research. It acknowledges the imperative to cross disciplinary and methodological boundaries in order to move away from a pathologising of old age. This critical approach offers alternative ways of accounting for the psychosocial, political and economic, and physical factors that impact on ageing. Concomitant with this philosophical position is a commitment to the full involvement of older people in all aspects of research, policy and practice (Phillipson, 1998; Bernard & Scharf, 2007; Holstein & Minkler, 2007).

Methods
The complexity of the research questions driving LARC required a range of research strategies:
• Biennial surveys (2007 and 2009) designed to facilitate comparison from findings with other research such as the English Longitudinal Study of Ageing and the British Household Panel Survey.
• Participant-as-observer ethnography, so that researchers are clearly identified in that role whilst undertaking observational field-work.
• Diary-keeping by residents, giving access to the day-to-day intimate individual experience of daily life.
• Directed writing exercises in themes such as community and staying active.
• In-depth interviews and focus groups around different topics such as the vision behind the development of the village and moving home.
• Photography to visually document the development of the village, people’s use of space, and spatial relationships between different parts of the village.
• Collation of contextual documentation such as media reports, policy documents, annual reports, and minutes of meetings.

CHALLENGES
Challenges 1: Methodology & methods
A fundamental challenge for LARC has been to articulate its position on the spectrum of mixed-methods, and to consider the implications for data generation and analysis. In LARC, in keeping with a critical gerontological perspective, all methods have equal status. This does not mean they necessarily generate equal volumes of data. However, applying equal status to a range of data raises complex issues in relation to analysis, in particular how the various data are analysed to produce ‘integrated’ findings. It is not enough to analyse the data within each method and then combine; rather each set of data must be analysed in stages, emergent findings compared across other data sources, and possible findings adjusted before higher order conclusions can be drawn, i.e. an integrated analytic strategy.

Challenges 2: The research team
Mixed methods studies require a range of expertise and a pooling of disciplinary backgrounds. In order to achieve agreed outcomes, with each member having clear roles, responsibilities and skills (Kozlowski & Ilgen, 2006). Within LARC structures were put in place that allowed for attendance at ‘team research’ e.g. all team members were expected to contribute to every method at all stages in the research, including design, data collection, analysis and dissemination, regardless of disciplinary expertise. Creating this sort of culture creates the opportunity to challenge established practice and theoretical boundaries and develop innovative ways of understanding ageing.

Challenges 3: Anonymisation
The complexity, volume and range of data in LARC raised significant challenges in relation to anonymisation, storage and retrieval. A strategy for staged anonymisation was developed to provide effective protection of participants in stored data without losing nuances within the data which might be important in analysis. Consequently, final decisions on degree of anonymisation are taken after analysis but ahead of dissemination.

Challenges 4: Retention
In any longitudinal work, retention of participants is a key issue. This was crucial in LARC because of 1) the ageing of the original population, and 2) the overall small population size (<300). Steps taken to support retention included: surveys being administered face-to-face by members of the research team; team members attending events in the Village to build relationships; sending Christmas cards to all residents; including residents on the project Advisory Board; and designing field-work to take place in waves, so as to reduce the potential for residents to feel overburdened. In addition, regular liaison meetings were held with senior staff in the Village to ensure that the research team remained sensitive to any other burdens on residents, e.g. other research commissioned by the organisation.

CONCLUSIONS
Longitudinal mixed-method studies like LARC remain rare in gerontology but are increasing because of the awareness of their importance in understanding ageing. In order to contribute to the on-going development of theoretically driven longitudinal mixed methods research, it is important that researchers have the opportunity to explore the challenges inherent within this profoundly complex approach. In order to do this it is essential that the research community takes responsibility for creating a culture in which it is acceptable for individual researchers to report difficulties encountered and to both document the steps taken to address these and to reflect on their efficacy.

REFERENCES