REVIEW
Improving Quality of Life Outcomes in Supported Accommodation for People with Intellectual Disability: What Makes a Difference?

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Background The quality of life (QOL) of people with intellectual disability living in supported accommodation services is variable, influenced by many possible factors. Various frameworks have attempted to identify these factors without assigning value, direction of influence or relative impact on outcomes.
Methods A realist review of the literature aimed to expose different propositions about variables influencing QOL outcomes and review the strength of supporting evidence for these, to identify their relative influence. Evidence was reviewed for and against each of five clusters.
Results Evidence was strongest for the presence of staff practices (use of Active Support), front-line management

practice (use of practice leadership), culture (enabling and motivating), human resources policies and practice (that support front-line leaders and recruitment of staff with the right values), adequate resources, and small, dispersed and homelike settings.
Conclusions The evidence informs policy and practice but in some clusters remains limited, warranting further research which measures outcomes on all QOL domains.

Keywords: intellectual disability, outcomes, service quality, supported accommodation, variables influencing quality of support

Introduction

Since the late 1970s, community living for people with intellectual disabilities has been the focus of policies in many Western countries and of international conventions. Closure of long-stay institutions and the development of community services, such as family support and supported accommodation, have been important policy implementation strategies. Most common supported accommodation models have been either shared supported accommodation combining housing and support usually in small group homes with 24-h staffing, or supported living which separates housing from support, where people live in their own or rented housing, alone or with up to two others, with support tailored to individual needs. In times of austerity, scarcity of affordable housing and especially in countries where resources are more limited, shared

supported accommodation options are likely to remain the dominant option.

The initial concepts that drove community living policies, such as normalization and an Ordinary Life (Kings Fund 1980), have been superseded by a rights perspective and expectations that people with intellectual disabilities should have a quality of life comparable to other community members (United Nations, 2006). Schalock *et al.*'s (2002) conceptualization of quality of life as having eight domains: emotional well-being, interpersonal relations, material well-being, personal development, physical well-being, self-determination, social inclusion and rights, is most commonly used in this field. A significant body of research shows better quality-of-life outcomes for people living in supported accommodation services, compared to those in larger or clustered settings (Kozma *et al.* 2009; Mansell & Beadle-Brown 2009).

However, research also demonstrates variability in outcomes of supported accommodation services, both between services managed by the same organization, and for service users with differing characteristics (Netten *et al.* 2010). Characteristics, including older age, lower levels of adaptive behaviour, more complex needs such as autism, and challenging behaviour (Thompson *et al.* 1996; Rapley & Hopgood 1997; Saloviita & Åberg 2000; Mansell *et al.* 2003a,b; Beadle-Brown *et al.* 2009; Petry *et al.* 2009; Vos *et al.* 2010; Endermann 2013), have all been associated with poorer quality-of-life outcomes in supported accommodation.

Despite overall gains evident from community living, the quality of life of people with intellectual disability compares poorly to the general population. For example, they experience higher rates of poverty, poorer health, and higher rates of social isolation and unemployment (Emerson *et al.* 2005). Searching to improve the quality of services and outcomes for service users, researchers have identified a 'bewildering array of variables' (Stancliffe *et al.* 2004, p. 470) and developed various frameworks to capture these (Mansell *et al.* 1994; Hastings *et al.* 1995; Felce *et al.* 2002a). Characteristically these reflect ideas that services are open systems (Harrison 1994), providing ways of thinking, rather than explaining the value/nature of variables, directions of influence or ways they interact. For example, staff qualifications are often thought to affect outcomes, but neither type of qualification or direction of effect are articulated. There is no overarching theory of how supported accommodation services operate; which combination/s of variables impact most on outcomes. While conceptually useful, frameworks have limited value in helping policy or managerial decision makers in directing resources to get better outcomes.

As an initial step in theory development, we aimed to 'map the terrain' of supported accommodation services, to (i) expose and synthesize different theories or propositions about variables that influence service quality and consequentially quality-of-life outcomes for service users (outcomes), and (ii) review the strength of supporting evidence for these, to identify their relative influence. This will not tell policymakers or managers whether supported accommodation works or not but will provide them with a rich, detailed and highly practical understanding of this complex social intervention (i.e. supported accommodation services), that will be useful for planning and managing services (Pawson *et al.* 2005).

Approach and Method

We drew on work from the health sector and use of realism to understand how complex interventions work in order to improve outcomes (Pawson *et al.* 2005). Rather than following a charted course, a realist approach to review engages with the literature through a process of exploration, aiming to unpack the black box of interacting variables in an intervention to pick up, track and evaluate underlying theories (Pawson *et al.* 2005). Importantly, a realist review does not follow procedures characteristic of systematic reviews, or identify a finite set of papers. Rather the scope is broad and realist review aims to identify the body of working theories that lie behind an intervention. As indicated, 'supported accommodation' was the intervention at the centre of the review, which we defined as either small group homes dispersed in the community with 24-h staffing or arrangements where people with intellectual disability either lived alone or shared with one or two others and received drop in support tailored to their needs. Therefore, larger clustered or shared models of accommodation such as nursing homes or clustered living units on campus sites were not included.

The review was conducted by a team comprising the authors, the late Professor Jim Mansell and Dr Tim Clement (until his departure in mid-2013). Two research assistants provided support with searches and data extraction in the latter stages. We followed iterative steps. The first was to 'scavage ideas from different sources to produce a long list of inherent theories' (Pawson *et al.* 2005, p. S125). Team members drew on their breadth of deep research experience in this field and significant knowledge of the extant literature to identify core literature about how supported accommodation was thought to work. A series of team meetings were used to select a purposive sample of literature that traced ideas back over time and reflected the diverse analytical approaches and opinions. The initial sample comprised the forty-four documents listed in Table 1, which included academic and professional journal articles, books, government and other reports and commentaries published between 1970 and 2010.

The documents were analysed to identify the theory or propositions they contained, and the value of particular variables and direction of effect, or, as appropriate, theory about why this variable was important, in what circumstances, for whom and why. Some propositions were explicit and formally stated. For instance, 'One might hypothesise that higher staff availability may be better translated into increased

Table I Documents included in primary review categorized by type and mapped over time

Type period	Commentary or opinion, for example editorial review	Ethnographic study	Conversation analysis	Mixed methodology case study, individual or organization	Model building	Qualitative interview study	Quasi-experimental study	Questionnaire survey	Review of the literature
2010 +	Mitchell (2010) Stevenson (2010)								
2000–2009	Fyson & Kitson (2007) Flynn (2006) Vorhaus (2005)	Levinson (2005)	Antaki et al. (2008)	Commission for Social Care Inspection & Healthcare Commission, (2006)	Parmenter & Arnold (2008)	Hollomotz & The Speakup Committee (2008)	Singh et al. (2009) Mansell et al. (2008) Felce et al. (2008) Felce et al. (2002a)	Grieve et al. (2008)	Graham (2005) Ouellette-Kuntz (2005) Felce & Emerson (2001)
1990–1999	Singer (1999)	Croft (1999)		Felce et al. (1998) Felce & Beyer (1996) Hastings et al. (1995) Mansell et al. (1994)			Hatton et al. (1999a) Stancliffe & Lakin (1998) Felce & Perry (1995) Felce & Repp (1992)	Hatton et al. (1999b) Stancliffe (1997)	Emerson & Hatton (1994)
1980–1989	Felce (1989b) Donabedian (1988) Kenefick (1988) Tyne (1981)			Felce & Toogood (1988) Saxby et al. (1986)			Bratt & Johnston (1988) Felce et al. (1985)		Baker & Blacher (1988)
1970–1979	Butler & Bjaanes (1977)			Thomas et al. (1978)				Berdiansky & Parker (1977)	
Prior to 1970	Mead (1923)								

interaction with residents if settings adopt structures for planning how to make the best use of staff' (Felce *et al.* 2002a, p. 390). Others were implicit. For instance, 'The skills and technologies are fairly easy to teach, the beliefs and attitudes are every bit as important, but may be more difficult to teach and acquire' (Tyne 1981, p. 5). Embedded in this comment are assumptions about the 'type' of employee services should recruit, and the greater importance of selecting staff with the 'right' beliefs and attitudes.

Key data about propositions and outcomes were extracted from each document and compiled into a spreadsheet to form a 'long list' of 60 propositions about 53 outcomes. Schalock *et al.*'s (2002) quality-of-life framework was used to collapse the initial 53 outcomes into eight quality-of-life domains. Team discussion of the long list, in a series of consensus meetings, was used to prepare an initial schema that clustered propositions using the consistent form, 'quality of life outcomes for services users of supported accommodation are better when…'. The initial clusters were refined by the team during the second step of the process which involved purposeful literature reviews to identify and extract the evidence for and against each proposition. The Web of Science databases were searched by research assistants over several occasions from 2010 to 2014 to ensure that the evidence for each proposition was as comprehensive as possible. Identified papers were analysed, and data extracted and compiled into a spreadsheet of evidence for each proposition and its various subparts. In many cases, specific aspects of a study relevant to identified

propositions were the unit of analysis rather than an entire study. Quality was not assessed using criterion checklists as one might for a systematic review but rather inclusion relied on judgements of the authors about 'fitness for purpose' based on relevance and rigour (Pawson *et al.* 2005). For the most part, this step of the review included empirical studies or systematic literature reviews, but also some research reports and emerging work known to the authors.

Findings

Table 2 summarizes five clusters of propositions about what makes a difference to outcomes in supported accommodation. The evidence for each cluster is reported below using right-to-left thinking (Schalock 2011), starting with those closest to service users and potentially the most direct impact. Space limited inclusion of citations for all supporting evidence for each proposition.

Cluster 1: Front-Line Staff and Managerial Working Practices

Staff practice that reflects active support

The proposition that outcomes are better if staff use the enabling style of support conceptualized as Active Support recurs in the literature (see Mansell & Beadle-Brown 2012 for review). Its origins are in the earliest UK research on community living, that identified staff care practices could facilitate participation in activities and skill development (King *et al.* 1971). A strong body of research now shows that if staff use Active Support outcomes improve across a number of quality-of-life domains, including time spent engaged in meaningful activities and social interactions (Mansell & Beadle-Brown 2012), participation in a wide range of household and community-based activities (Jones *et al.* 2001a), improvements in skills and personal development (Felce *et al.* 1986; Mansell *et al.* 2002), improvements in choice, self-determination and autonomy (Beadle-Brown *et al.* 2012a,b), reduction in challenging behaviour (Beadle-Brown *et al.* 2012a,b) and mental health issues such as depression (Stancliffe *et al.* 2010).

Staff practice responsive to the specific needs of each individual

The proposition of improved outcomes when staff practice is responsive to specific needs of each individual and compensates, as far as possible, for sometimes inherently disadvantageous characteristics, is implicit in research, cited earlier, about the disproportionately poorer outcomes for some groups. While responding to the needs of people is core to active support, Mansell *et al.* (2004) suggested that additional approaches may also be needed depending on the needs of the individuals supported. For example, good support for communication is an essential part of active support but the use of some formal assessments and the development of specific tools or communication strategies might be needed for some people (Beukelman & Mirenda 2013). There is also some evidence more generally that staff skills in supporting communication can have beneficial effects on quality of social interactions and in some cases on quality of life more generally (Kenefick, 1988; Owen *et al.*, 2007).

Ockenden *et al.* (2014) argue that Active Support helps to reduce challenging behaviour, but for some people staff practice needs to incorporate other aspects of Positive Behaviour Support (PBS) such as the development of a behaviour support plan. Evidence in this area is very limited. A systematic review found the only study that investigated the benefits of PBS in terms of quality of life rather than reduction in challenging behaviour showed no change (MacDonald & McGill 2013). However, emerging evidence by McGill (2014) from a small randomized control trial showed that when staff implement PBS then engagement in meaningful activities and relationships is higher for people with challenging behaviour.

Other staff practices, proposed as important to outcomes, include use of the SPELL framework (for people with autism and intellectual disability) (Beadle-Brown & Mills 2010), intensive interaction (Nind & Hewett 2006), person-centred planning (O'Brien & O'Brien 2000) and person-centred thinking (Smull & Sanderson 2005). Evidence about all of these is as yet very limited. For example, there is some evidence about different elements of the SPELL framework, but not in its entirety, and the only large-scale study evaluating the impact of person-centred planning (Robertson *et al.* 2005) showed positive impact on choice and autonomy and social networks but no other quality-of-life domain.

Key findings and strength of evidence about staff practices

The proposition with the strongest evidence is that staff practices that reflect Active Support lead to better outcomes for service users including those with

Table 2 Summary of propositions about quality-of-life outcomes in supported accommodation services. Each should be prefixed the quality of life of service users in supported accommodation services will be improved if …

Propositions	Original source
Cluster 1. Front-line staff and managerial working practices reflect values and principles of organization and place quality-of-life outcomes at the centre	
Staff practices reflect active support	Mansell *et al.* (2001)
Staff practices are responsive to specific needs of each individual and compensate, as far as possible, for sometimes inherently disadvantageous characteristics	Mansell *et al.* (1994)
Managerial practices recognize and reinforce good staff practice	Mansell *et al.* (1987)
Staff are given clear and consistent expectation about their practice congruent with values that place service user QoL as central	Mansell *et al.* (2004)
The focus of practice leadership is on service user quality-of-life outcomes and congruent with the principles of active support	Felce & Repp (1992)
Cluster 2. Culture	
Culture is therapeutic	Butler & Bjaanes (1977)
Culture is less institutional	Felce & Repp (1992)
Formal and informal culture in the organization are congruent	Hastings *et al.* (1995)
Culture is more homogenous, which is more likely in services which have operated for longer	Stancliffe & Lakin (1998)
Culture is coherent, enabling, motivating and respectful	Bigby & Beadle-Brown (in press)
Cluster 3. Organizational characteristics, policies and processes	
Coherence of mission, governance and operating procedures	
Service users' quality of life is central to the mission of the organization	Mansell *et al.* (2004)
There is clarity of organizational leadership and mission	Felce & Repp (1992)
There is a common philosophy in the organization among the majority of staff	Thomas *et al.* (1978)
Those involved in governance understand principals of good staff practices	Mansell *et al.* (2004)
There is diverse membership of governance body	Thomas *et al.* (1978)
Abstract goals and values are translated into functional statements so staff have a clearer understanding of their role	Mead (1923)
Organizational policies and procedures are congruent with and reflect values that place quality of life of service users' as central to all operations	Mansell *et al.* (2004)
Organizational arrangements and procedures are effectively coordinated	Mansell *et al.* (1994)
Data about quality-of-life outcomes and performance are recorded and accessible to managers	Emerson & Hatton (1994)
Working procedures (such as assessment, care planning, person-centred planning, sexual rights, skills teaching and positive behaviour support) are clearly defined	Commission for Social Care Inspection & Healthcare Commission (2006)
There are clear performance and process standards	Felce & Repp (1992)
The organizational structure has limited span of control	Tyne (1981)
Supervision procedures for staff are clearly defined and appropriate	Emerson & Hatton (1994)
Training for staff	
Customized staff and management training is available	Felce & Perry (1995)
Organization of staff training for Active Support includes classroom and hands-on components	Jones *et al.* (2001a)
Staff characteristics	
Staff have the right values that place QoL outcomes at centre of their work	Thomas *et al.* (1978)
Staff perceive congruency of stated with actual values of the organization	Mansell *et al.* (2008)
There is heterogeneity among the staff group	Stancliffe & Lakin (1998)
Staff have high job satisfaction & low job strain	Mansell *et al.* (1987)

(continued)

Table 2 *(continued)*

Propositions	Original source
Staff have role clarity, personal development, staff selected with the right beliefs	Allen *et al.* (1990)
Staff are motivated	Allen *et al.* (1990)
Staff hold professional qualifications	Thomas *et al.* (1978)
Staff are experienced	Felce *et al.* (2002b)
There is little turnover of staff	Hatton *et al.* (1999a)
Cluster 4. The necessary but not sufficient resources and setting are available	
There are adequate resources with just enough staffing to meet people's needs but not too many	Emerson & Hatton (1994)
There is ordinary housing dispersed in the community, that is small in size, homelike, close to amenities, public transport and family	Felce *et al.* (1998)
Service users with similar characteristics, particularly challenging behaviour, are not grouped together	Raynes, 1980, cited in Mansell & Beadle-Brown (2004)
Cluster 5. External environment	
Practice of service commissioners and funders is congruent with a mission that places quality-of-life outcomes at the centre of everything they do	Mansell *et al.* (2008)
External standards and inspection/auditing practices are congruent with the mission	Mansell *et al.* (2008)
Services are not overregulated	Croft (1999)
Pressure for better quality services is exerted by service users' families	Race (2007)
External professionals have positive attitudes	Thomas *et al.* (1978)
There are supportive social policies and legislation	Emerson & Hatton (1994)
Labour market conditions are favourable to staff retention and stability	Larson *et al.* (2005)

complex needs. Although there are no randomized control trials, the evidence base for this proposition spans four decades, involves at least 1400 people, uses different methodologies, in different countries, in different settings and involves different research teams and training approaches. Evidence for other working practices that nonetheless put the person at the centre of support is much weaker. There is some encouraging new research related to PBS. However, the training model used by McGill and colleagues included Active Support as an important component which is not the case for all models of PBS training. This means that findings from the emerging research in this field may be more mixed.

Managerial practice

Propositions about the positive influence of managerial practices that recognize and reinforce good staff practice stem from an overarching proposition that staff need both skills and motivation to practice well (Mansell *et al.* 2004). The weak evidence in this area may be due to the relative absence of this type of management practice. For example, Mansell *et al.* (1994) proposed that

managers need to give staff clear and consistent messages about the expectation that their practice will reflect organizational values that put service user quality-of-life outcomes at the centre of everything they do. While there is no evidence to support this proposition, Mansell & Elliott (2001) found that one-sixth of staff said that they thought no one would notice what they did with service users – good or bad, and that the activity with the biggest consequences from managers was whether they were completing the paperwork correctly.

More particularly, there are propositions about the positive influence, in terms of improving and maintaining good staff practice, if front-line management incorporates all or some of the elements of practice leadership. Beadle-Brown *et al.* (2014) conceptualized practice leadership as the front-line leader's work focusing on all aspects of service users' quality of life, including allocating and organizing staff support, coaching, modelling and supervising individual staff and reviewing practice with staff teams. Embedded in this conceptualization are several propositions about the positive influence of assisting staff to organize their work in order to provide consistent support for engagement and ensure that

service users do not experience periods of disengagement or 'get lost' between staff and activities (Lelaurin & Risley 1972; Mansell *et al.* 1987). Tools such as support or shift plans that are discussed rather than simply written down, and lead to a shared understanding among staff have been proposed as useful by Ashman *et al.* (2010), Mansell *et al.* (2004), Clement & Bigby (2010) and Mansell & Beadle-Brown (2012). However, the impact of shift plans has not been explored.

Supervision has received some attention, but primarily in terms of the presence of clearly defined and appropriate procedures (Emerson & Hatton 1994), which are discussed in a later section. However, Mansell *et al.* (2008) found a relationship between frequency of supervision and the amount of staff assistance. Combining all aspects of practice leadership, and using a staff-rated measure, Beadle-Brown *et al.* (2014) found higher levels of practice leadership combined with good management practice led to higher levels of Active Support, but neither were effective on their own. Using an observational measure, Beadle Brown *et al.* (2015) found significant relationships between higher levels of practice leadership and levels of Active Support. This was in services with relatively low practice leadership, and the authors hypothesized a stronger relationship would be found in services where levels were higher. Supporting these propositions too is qualitative evidence from the study of culture in group homes that suggests strong practice leadership is both a characteristic and generative factor of the culture in better performing services (Bigby & Beadle-Brown in press).

Key findings and strength of evidence about managerial practice

There is limited evidence about managerial practices, but the strongest emerging finding is the importance of practice leadership by front-line managers in the development and maintenance of staff working practices that reflect Active Support. However, this is likely to be most effective within the context of generally good management. The link with outcomes is likely to be indirect, with the impact being on staff working practices which in turn impact on outcomes.

Cluster 2: Culture

Some propositions suggest the positive influence of cultural coherence across an organization and within individual services. Hastings *et al.* (1995) proposed

that the less congruent the formal and informal culture, the less likely staff would be to comply with formal policies and procedures which in turn detracts from good outcomes on the assumption that compliance promotes good practice. Incongruence was suggested to be greater in more dispersed services (Mansell *et al.* 1994). In a similar vein, Stancliffe & Lakin (1998) proposed the importance of an organization having a coherent culture aligned with its mission. They also suggested homogeneous culture was more likely in longer established services, although this could work either to maintain alignment with organizational culture or result in resistance to change. These propositions draw on cultural and organizational theorists, but there is almost no empirical evidence of their applicability to services for people with intellectual disabilities.

Some of the earliest ethnographic work that compared culture in different services (Butler & Bjaanes 1977) suggested a therapeutic culture was more likely to lead to the realization of normalization-based goals. Felce & Repp (1992) proposed that less institutional cultures were associated with better outcomes, but the evidence for this stems from comparison of institutions with small group homes, rather than similar-sized services with each other.

Only two studies have explored culture in services in any detail. Using a generic measure, a small-scale study found the service with the more positive culture, also scored higher in terms of outcomes (Gillett & Stenfert-Kroese 2003). A larger ethnographic study of group homes with relatively poor outcomes identified five dimensions of culture; alignment of power holder values, regard for service users, perceived purpose, working practices, and orientation to change and ideas, as potentially applicable to all group home, and described the negative polar end of each dimension (Bigby *et al.* 2012). A second study described the culture in 'better group homes' that rated well but not optimally on quality-of-life domains (Bigby, Knox, Beadle-Brown & Bould, 2014; Bigby *et al.* 2015; Bigby & Beadle-Brown in press). Culture in better homes was characterized as coherent, enabling, motivating and respectful. These studies have effectively compared the nature of culture between services delivering different quality outcomes. This research group are developing a measure of group home culture based on the five dimensions to explore the relationship between culture and outcomes in a larger study (Humphreys *et al.* 2016) and are conducting an ethnographic study of services identified as having good outcomes.

Key findings and strength of evidence about culture

Despite being an area widely proposed as important in determining outcomes, there are very few descriptions of culture in supported accommodation, or empirical studies of the impact of different types of cultures. This is an area of emerging research with recent studies starting to describe and measure culture of services.

Cluster 3: Organizational Characteristics, Policies and Processes

Coherence of mission, governance and operating procedures

The first set of propositions in this cluster relates to governance and the overarching way an organization operates. Proposed is the positive impact on outcomes if: the mission statement has a clear sense of purpose and places the quality of life of the people it supports at the centre of all organizational and staff activity (Felce & Repp 1992; Mansell *et al.* 2004); abstract goals and values are translated into functional statements to promote role clarity (Mead 1923; Felce 1989a; Mansell *et al.* 2004); there is a shared philosophy among a large proportion of staff (Thomas *et al.* 1978); governance bodies have members from diverse backgrounds (Thomas *et al.* 1978); and their members understand the principles of good staff practice (Mansell *et al.* 2004).

Although there is limited evidence for these propositions, some is indirectly supportive. For example, role ambiguity was found by Hatton *et al.* (1999a) to relate to staff stress and lack of well-being, which might be argued to indirectly impact on outcomes. Hewson & Walker (1992) and the Commission for Social Care Inspection and Healthcare Commission (2006) both concluded that an absence of vision, a lack of leadership and a clear operating plan contributed to poor outcomes and in some cases to abusive practices. Finally, Kelly (2010) provides some evidence for how organizational philosophies shape staff behaviour and thus outcomes potentially.

The second set of propositions focus on organizational policies and procedures, suggesting they need to be coherent and congruent with the aim of achieving good outcomes for service users. In this area, the focus has been Human Resource functions (HR), such as recruitment, job descriptions, promotion, supervision and performance management both disciplinary procedures and forms of recognition (Mansell *et al.* 1994, 2004; O'Neil & Hewitt 2005). Emerson & Hatton (1994) had also proposed the importance of effective monitoring and information systems that help managers to know about quality-of-life outcomes for service users.

Again, these propositions have received very little research attention. Stancliffe *et al.* (2000) found service users had higher personal control where policies about supporting user autonomy existed. In contrast, Perry & Felce (2005) did not find any relationship between the presence of a process for staff supervision and outcomes.

The third group of propositions highlight the need for clearly defined procedures to guide the work of staff, in areas such as assessment, skills teaching, activity planning, sexual rights and behaviour support. These have been prominent in reports about services where things have gone very wrong (Commission for Social Care Inspection and the Healthcare Commission 2006). Evidence about these propositions is very mixed. Felce & Perry (1995) found that levels of choice and community activities were higher if systems were in place for individual planning but little evidence about influence of assessment and teaching. Felce *et al.* (2002b) reported that measures of the internal organization and the non-institutional characteristics of the settings were associated with the number of types and frequency of community events that people attended, community involvement more generally and engagement. Fyffe *et al.* (2008) found the presence of good processes and practices about things such as training and teamwork were associated with staff-reported changes in practice and fewer problems implementing Active Support.

On the other hand, Perry & Felce (2005) found that less emphasis on assessment appeared to be related to more frequent community activities, and Felce *et al.* (2002a) found that assessment and planning were not associated with service user outcomes or staff activity, except for a negative association between the extent of planned activities and community involvement. Similarly, Jones *et al.* (2001a) found that the existence of an activity planning system in itself was not enough to increase levels of engagement, and Mansell *et al.* (2008) found that only the presence of systems that supported service user activity and staff training were positively related to levels of engagement. There were no relationship with other aspects of planning systems such as assessment.

Key findings and strength of evidence about organizational coherence

Despite the number of propositions, there is, as yet, very little research exploring impact of organizational characteristics, policies and processes on outcomes.

However, there is a little about the impact on staff well-being and motivation which is assumed to impact on their performance and thus on outcomes. There is however some qualitative evidence that suggests some of the generative factors of culture in better group homes cross cut many of these propositions, such as HR policies and practices consistent with organizational values and mission and translation of abstraction concepts into clear expectations of staff (Bigby *et al.* 2015). However, the most evidence appears to be around the use of systems and processes that supported resident engagement and these studies are also relatively strong in terms of larger sample sizes which make inferential analysis possible.

The availability and organization of training

Felce & Perry (1995) and Felce *et al.* (2000) proposed staff training was associated with better outcomes, and Tyne (1981) that training customized to fit the needs of individual service users and staff had a greater impact on outcomes than generic training. There is some evidence to support the positive impact of various types of staff training on their attitudes, though not always showing a link to service user outcomes. For example, training in communication skills improves the nature and quality of communication between service users and staff (Kenefick 1988; Owen *et al.* 2007); although not necessarily associated with improvements to quality of life, training in mindfulness reduces challenging behaviour (Singh *et al.* 2009). Despite not leading to more relationships, training in sexuality can change staff attitudes towards personal relationships for people with intellectual disabilities (Grieve *et al.* 2008); although staff training in PBS results in positive change in their skills, confidence, knowledge, attributions and emotional responses and a reduction in service users challenging behaviour, no other change in quality of life was found in the only study that evaluated quality-of-life outcomes (MacDonald & McGill 2013).

Implicit in the earlier section is the assumption that staff training in Active Support leads to more enabling staff practices that improve service user outcomes across a number of different domains. Evidence suggests, however, that training alone is not sufficient to sustain staff practice of Active Support over time (Mansell *et al.* 2013).

A further proposition is that to be effective Active Support training should include both classroom and 'hands-on' components (Jones *et al.* 2001a; Mansell *et al.* 2004). There is mixed evidence. Jones *et al.* (2001a) found that implementation of Active Support was poorer when hands-on training was not provided (in this case via managers). A small study (Toogood 2008) found increases in assistance and engagement when staff just had hands-on training, but a larger study by Totsika *et al.* (2010) found no change in outcomes or staff practice when staff only had hands-on training (or classroom-based training more than a year before hands-on training).

Evidence for staff being trained by managers is less convincing, although it is possible that this might be because they do not follow through with hands-on training as in the Jones *et al.* (2001a) study. Mansell *et al.* (2008) found that where managers were responsible for training (and trained as trainers), there were significant differences in outcomes and quality of staff support compared to services where they were not. However, this difference was smaller than would have been expected from previous research where staff had been trained directly.

Key findings and strengths of evidence about training

There is some evidence that training staff in specific skills impacts on outcomes at least in some areas but the evidence is most comprehensive with regard to training in Active Support, especially if a hands-on practical element is included.

Staff characteristics

Various propositions suggest that having staff who have the right values and attitudes will lead to better outcomes (Thomas *et al.* 1978). Mansell *et al.* (2004) qualified this proposition, saying the right values were those that place the quality-of-life outcomes of service users at the centre of their work. There is some supporting evidence indicating that when the quality of support is poor, staff attitudes are also generally poor (Flynn 2006), although more studies have investigated staff attitudes than have looked at the impact on outcomes. Egli *et al.* (2002) reported that positive staff attitudes were significantly related to greater participation in community activities and Mansell *et al.* (2008) reported that staff quality of support was better when staff appeared to believe they should spend time talking with service users. Finally, Rossow-Kimball & Goodwin (2009) in a qualitative study comparing two group homes found that choice and engagement in leisure activities were much greater in the home where staff were committed to self-determined leisure activities.

A further proposition by Mansell *et al.* (2008) is that staff practices are more likely to reflect organizational

values, and lead to better outcome, if staff perceive the actual and espoused values of the organization are congruent. Some indirect support for this proposition is the finding by Balcazar *et al.* (1998) that staff perception of organizational adherence to the value of inclusion impacted on job satisfaction. However, despite a number of propositions around staff satisfaction and stress, no research was found that explored the proposed links between staff job satisfaction and stress and outcomes for people supported.

Thomas *et al.* (1978) and Mansell *et al.* (2008) proposed that having professionally qualified or experienced staff leads to better working practices and therefore outcomes. However, no evidence was found that either of these predicted quality of support or levels of engagement in studies by Felce *et al.* (2002a,b) and Mansell *et al.* (2003a, 2008).

Finally, Hatton *et al.* (1999a) proposed that services with more stable staff groups have better outcomes. This proposition echoed that by McGill & Mansell (1995) who suggested that support deteriorated with staff turnover and Stancliffe *et al.* (2008) that high staff turnover negatively impacted on implementation of Active Support. Larson *et al.* (2004) showed that high vacancy rates, increased use of overtime and turnover rates above 50% had a negative impact on the quality of support. However, Mansell *et al.* (2003a) reported no association between staff turnover and either service user engagement or the quality of staff support.

Key findings and strength of evidence about staff characteristics

The research in this area is very limited, and even where there is research, the picture is mixed, with some studies showing relatively weak relationships between outcomes and staff characteristics, in particular attitudes, and others none. The methodologies were primarily small-scale studies, with the stronger evidence coming from the Mansell *et al.* (2008) study, that had a much bigger sample of staff and data on quality of staff support as well as service user outcomes, and found very few relationships between these variables.

Cluster 4: Necessary but Not Sufficient Resources and Settings

Resources

The main proposition here, that adequate resources are a necessary but not sufficient condition for good outcomes (Emerson & Hatton 1994), is supported by strong evidence from two studies that demonstrate

high-cost services do not necessarily lead to better outcomes (Walsh *et al.* 2010; Beadle-Brown *et al.* 2012a, b). There is no direct evidence however about the level below resources would have to fall to negatively affect outcomes, although this might be surmised from the comparative work on skilled service provision reported by Beadle-Brown *et al.* (2012a,b).

Staff costs account for a high proportion of the resources necessary for shared supported accommodation. There is mixed evidence to support the proposition that a higher staff ratio results in more staff contact and therefore better outcomes (Felce & Perry 1995; Felce *et al.*, 2003). Emerson *et al.* (2000) found better staff ratios were related to more staff contact, and in turn higher levels of engagement. Felce *et al.* (2002a) found however that while higher staff ratios resulted in more assistance overall the contribution of each staff member reduced.

In contrast, Felce & Perry (1995), Mansell *et al.* (2003a) and Robertson *et al.* (2001) found no significant association between staff ratio and outcomes. Looking specifically at self-determination, Saloviita & Åberg (2000) support these findings, showing that self-determination was not influenced by the number of staff in a setting. Indeed, some evidence indicates it is possible to have too many staff. Felce & Repp (1992) and Mansell *et al.* (1982) found that services with higher staff ratios had less staff–service user interactions and engagement than those with lower ratios. Findings by Felce *et al.* (2008) were mixed, showing that more staff was associated with poorer health and money management and less variety in community activities and less staff was associated with more engagement, more self-determination, and better social networks outside of family. There were no difference in terms of loneliness. A similar study to Felce *et al.*, comparing outcomes for people living in supported living and group homes settings (where the former have less hours of staff support) found similar quality-of-life outcomes for a matched subsample of services users (Bigby *et al.* in press). Finally, Mansell *et al.* (2010) found that the bigger the service, the lower the staff ratio and less contact from staff and consequently lower levels of service user engagement. Adding staff within these services only appeared to make a difference when the service was already providing good Active Support.

Size and type of setting

The overarching proposition that small supported accommodation services in ordinary housing dispersed

in the community are necessary but not sufficient to bring about better quality of life (Mansell 2006) is supported by the evidence cited earlier from the substantial body of deinstitutionalization research and studies about the variability of outcomes in this type of service. Small is ill defined, and some supported accommodation services have between 14 and 20 places. Early studies found no relationships between size and outcomes of larger settings (King *et al.* 1971; Balla 1976). But size does matter in small-scale community settings, and evidence supports the proposition that settings of between 1 and 6 people have better outcomes. For example, Tossebro (1995) found that self-determination was better in settings with six or fewer people. Emerson *et al.* (2001) found that those in small group homes (1–3 places) had larger social networks and more people in their network who were not staff or people with intellectual disabilities, compared to those in large group homes (4–6 places).

There are implicit propositions in Australian policy about advantages of supported living over shared supported accommodation. The limited research comparing settings, at least when controlling for level of ability, has only consistently found better outcomes in terms of choice and control in supported living (Saloviita & Åberg 2000; Stancliffe & Keene 2000; Emerson *et al.* 2001; Bigby *et al.* in press).

Evidence for other propositions about setting characteristics is not well developed. For example, Mansell *et al.*'s (1987) proposition about the advantage of location in residential areas, close to community amenities, good public transport, and accessible to family and friends has received relatively little attention. In the few studies that do exist, it is hard to disentangle the effect of quality of staff support or service model on outcomes. For example, Emerson *et al.* (2005) found that service users living in poor areas experienced poorer outcomes on a number of domains but the analysis did not take account of either service model or support.

The small body of research from the UK on placing people away from their home area (out-of-area placements) provides some evidence for the advantages of living close to family, although this too has many confounding explanations. Perry *et al.* (2013) found some benefits to in-area placements, but the sample size was small and personal characteristics not controlled for. Similarly, Beadle-Brown *et al.* (2006) reported poorer outcomes, on some domains from out-of-area placements, especially for people with the most severe disabilities. Only on the domain of visits to families did they find

better outcomes, contrary to what might be expected from the other studies cited.

There is some evidence for propositions about the advantages of 'home likeness' and more normative home environments, in terms of things such as personal possessions, equipment and décor (Wolfensberger & Glenn 1975). Egli *et al.* (2002) found home likeness was positively associated with staff–service user interactions and community activities. Thompson *et al.* (1996) had similar findings about staff–service user interactions in more homelike settings but also positive association with involvement in household tasks, and negative association with physical aggression and stereotypic behaviour.

The final proposition in terms of settings relates to negative effects of grouping people with particular similar characteristics in a service (Raynes, 1980, cited in Mansell & Beadle-Brown 2004). Evidence supports this, specifically for people with challenging behaviour (Mansell 1994; Robertson *et al.* 2002; Mansell *et al.* 2003b) and, important to any action based on this evidence, Beadle-Brown *et al.* (2003) found no negative effect for people without challenging behaviour living with those with challenging behaviour. Mansell *et al.* (2003b) also found that a negative effect in terms of staff warmth and respect, for people who were non-ambulant and grouped together.

Key findings and strength of evidence about resources and settings

This cluster of propositions has some of the best evidence because of the huge body of deinstitutionalization research. Although there are many mixed findings and much variability in the size, quality and methodology of the studies, two propositions have a relatively strong evidence base: (i) outcomes are best in small (up to 6), ordinary settings (i.e. that represent what would be culturally accepted and fall within the range of housing options that other people without disabilities would access), that are homelike, and are dispersed within a community (preferably their local community); (ii) outcomes are better where there are enough staff (who have the right skills) to meet people's needs but not too many that they interact with each other or do everything for people rather than enabling and empowering people to do things themselves. Although the evidence base is a little weaker, there also seems to be some evidence that outcomes are better when people are not grouped together by disability level or additional needs such as challenging behaviour.

Cluster 5: The External Environment

Mansell *et al.* (2008) proposed that the demand or expectations in the form of standards, inspections or auditing practices, by external bodies, such as regulators, funders or commissioners, should be congruent with the values and approaches, particularly Active Support, that lead to a good quality of life for service users and place them at the centre of all organizational and staff behaviour. Very little research has explored this proposition. What does exist points to discrepancies between inspectors' ratings of supported accommodation services (based either on UK minimum standards or a different rating of quality) and research measures of the quality of support and quality of life (Beadle-Brown *et al.* 2008; Netten *et al.* 2010). For the most part, inspectors' ratings were more likely to reflect the management, environment, staff training, systems and processes than observed outcomes for service users.

Various propositions suggest that outcomes are better when family members exert pressure on the quality of services (Race 2007). While research has uncovered the efforts of family members to influence service responses, and the difficulties they experience (Knox 2000; Bigby *et al.* 2015), there is no specific evidence to support propositions about the positive influence of family involvement in supported accommodation services. There is, however, some evidence that family involvement and more well-resourced families gain better access to individualized funding packages (Neely-Barnes *et al.* 2008) and lead to better post-school outcomes (Test *et al.* 2009).

The values, attitudes and beliefs of external professionals were also suggested as important to the outcomes for those with whom they worked by Thomas *et al.* (1978). Although this proposal makes logical sense, no research was found to have investigated this issue.

Finally, Larson *et al.* (2005) propose that workforce conditions imposed by external conditions such as labour market conditions and wage agreements that lead to higher costs and rates of staff turnover have a negative impact on the quality of services. They suggest that, in addition to a number of other initiatives to improve recruitment, addressing wage and compensation issues are critical; however, there is as yet no research evidence that such strategies have a direct impact on the outcomes of those supported or on the care practices of staff.

Key findings and strengths of evidence about external environment

There is as yet little research about this cluster of propositions about the positive influence of an external supportive environment, although it makes logical sense, and is relevant to some of propositions discussed in earlier sections about adequate resources and staff turnover. What little there is about regulators shows a lack of congruency between, conclusions about quality of services from inspection processes in England and research-based measures of outcomes for service users.

There are also other possible propositions that have not been raised in the literature but are seen as important in the service delivery field. For example, an issue of current importance in Australia is the resources available to organizations through the funding system and whether they take into account costs of supervision. However, in the absence of very strict regulation that might make it hard to be flexible enough to respond to changing needs and wishes, this is likely to be a necessary but not sufficient condition for quality outcomes. This is a subject of debate in Australia in relation to National Disability Insurance Agency's

Table 3 Summary of propositions with strongest or most promising evidence about what makes a difference to quality-of-life outcomes for service users in supported accommodation

Propositions

Staff practice reflects Active Support

Staff practice compensates, as far as possible, for inherently disadvantageous characteristics of service users, particularly severity of disability and challenging behaviour

Front-line management uses all aspects of practice leadership

Service culture is coherent, enabling, motivating and respectful

There are strong organizational policies and practice in the area of HR (that support front-line leaders and recruitment of staff with the right values)

There are processes to assist staff to focus their practice on engagement of service users

Staff are trained in Active Support, and training has both class room and hands-on components

There are adequate resources for sufficient staff with the rights skills to enable people to participate in meaningful activity and relationships but not too many that they obstruct participation

Supported living options offer services users more choice and control

Settings are small (1–6 people), dispersed, homelike

costings of items and inclusion of time for staff supervision (Dowse *et al.*, 2016).

Similarly, external policy and registration processes for new services that allow larger, institutional settings may be a factor in determining availability of small supported accommodation services, and staff and families expectations (Behan in press). Although these propositions are implicit in many of the campaigns for change, for example in the UK post-Winterbourne View, there is very little research evidence that this would indeed be the case.

Conclusions

Overall, the evidence for many of the propositions about what influences the quality-of-life outcomes for people with intellectual disabilities in supported accommodation settings remains relatively limited. One limitation in the research overall was the fact that the evidence base related more to some quality-of-life outcomes than others – for example, there was very little research related to the physical well-being, material well-being, emotional well-being, social relationships and rights domains of quality of life. Most of the research related to engagement in meaningful activities and interactions within the individual's accommodation, access to community-based activities, choice and challenging behaviour with a few studies looking at mental health. For the most part, research relied on informant completed objective measures (e.g. how often people took part in activities in the community) or on observational methods of assessing people's lived experience. Very little research directly involved gaining the subjective experiences of people with intellectual disability, although this is likely to reflect the fact that many people involved in these studies were those with more severe intellectual disabilities who experienced difficulties with communication. The use of observational measures of engagement in meaningful activities and relationships has been argued to be a good proxy measure for many of the quality-of-life domains by Mansell & Beadle-Brown (2012), who suggest that if people are saying 'yes' to getting involved in meaningful activities and interactions then this indicates a level of contentment and satisfaction with both the opportunities available to them and the support they are receiving. However, future research could usefully incorporate a wider range of measures including where possible the perspectives of people with intellectual disabilities themselves using methods that do not require verbal communication or

making greater use of ethnographic methods to uncover lived experiences of people with severe or profound disabilities.

For some of the propositions identified, there was little or no evidence at all. This does not, however, mean that they are not valid propositions (many of them are derived from working directly with organizations), simply that they have not yet been explored by research. Table 3 is a tentative summary of propositions for which there is strong or promising emerging evidence. Those with the strongest evidence base (at least in terms of the number of studies from different research groups, different countries and with different methodologies) related to (i) ordinary housing that is small in size and dispersed in the community and (ii) staff and managerial working practices that reflect the principles of active support and which compensate, as far as possible, for inherently disadvantageous characteristics of service users, particularly severity of disability and challenging behaviour. However, even in this area, there were methodological limitations in the evidence base. Most studies were pre–post training comparisons, and there are, as yet, no randomized controlled trials in this field.

In terms of what might be influencing staff practice, there is emerging research evidence, all-be-it primarily from the research team of the current authors, related to the importance of practice leadership for front-line staff. However, as a longitudinal study of the implementation of Active Support shows, the challenge for managers is how to not only provide the skills but also motivate staff to use Active Support consistently (Bigby *et al.* 2016). In addition, it is clear from recent studies (Beadle-Brown *et al.* 2014; Beadle Brown *et al.* 2015), that although important practice leadership is not the only factor that is important in determining staff practice but there is very little research that explores practice leadership or the factors that facilitate this type of staff working and management practices.

More generally, apart from the nature of the settings managed by the organization (smaller than six places, dispersed in the community and not grouping together people with challenging behaviour), there is currently a lack of research related to most clusters of propositions that emerged from this review, listed in Table 2. As such there is a continued need for research to explore the factors that influence a wider range of outcomes for people with intellectual disability living in supported accommodation – in particular factors other than the quality of staff support and the role of the front-line leader. We need to know more about: the

characteristics, experience, training and support systems that make good practice leaders; the best way to train staff in a specific evidence-based practice (in this case Active Support); the most effective systems and structures for monitoring outcomes and measuring quality of support; the commitment, knowledge and structure required within the senior management team of any organization. At the generic level, some of this knowledge is already there in broader theories about how organizations work most effectively, in some of the research about other service systems, such as child protection, health or aged care, and in the professional knowledge base of social workers and psychologists. Drawing more strongly on theoretical propositions from other fields as the starting point for investigation may be one way to advance research in services for people with intellectual disability.

Having better knowledge of organizational generative aspects is important before going on to explore the role of the external environment, which requires large comparative studies involving different organizations with different structures and processes and working in different external environments. In taking a realist review approach, this paper has synthesized underlying propositions about what makes a difference to the quality-of-life outcomes for people with intellectual disability in supported accommodation services. By providing a summary of the evidence for the propositions it has identified significant gaps in knowledge and highlighted the current state of knowledge about what makes a difference. In so doing, it provides evidence-based indicators of where planners and managers might most effectively target resources and energy to improve the quality of existing services and the quality of life of people with intellectual disability who use them.

Acknowledgments

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References

Allen P., Pahl J. & Quine L. (1990) *Care Staff in Transition: The Impact on Staff of Changing Services for People with Mental Handicaps.* HMSO, London.

Antaki C., Finlay W., Walton C. & Pate L. (2008) Offering choices to people with intellectual disabilities: an interactional study. *Journal of Intellectual Disability Research* **52**, 1165–1175.

Ashman B., Ockenden J., Beadle-Brown J. & Mansell J. (2010) *Person-Centred Active Support: A Handbook.* Pavilion Publishing, Brighton.

Baker B. & Blacher J. (1988) Family involvement with community residential programs. In: *Community Residences for Persons with Developmental Disabilities* (eds M. P. Janicki, M. Wyngaardwn Krauss & M. M. Seltzer), pp. 173–188. Paul H. Brookes Publishing Co., Baltimore.

Balcazar F., MacKay-Murphy M., Keys C., Henry D. & Bryant F. (1998) Assessing perceived agency adherence to the values of community inclusion: implications for staff satisfaction. *American Journal on Mental Retardation* **102**, 451–463.

Balla D. (1976) Relationship of institution size to quality of care: a review of the literature. *American Journal of Mental Deficiency* **81**, 117–124.

Beadle Brown J., Bigby C. & Bould E. (2015) Development of an observational measure of practice leadership. *Journal of Intellectual Disability Research* **59**, 1081–1093.

Beadle-Brown J. & Mills R. (2010) *Understanding and Supporting Children and Adults on the Autism Spectrum.* Pavilion, Brighton.

Beadle-Brown J., Mansell J., Macdonald S. & Ashman B. (2003) Does living with people who have challenging behaviour result in poorer quality of care and outcomes? *The British Journal of Development Disabilities* **49**, 81–89.

Beadle-Brown J., Mansell J., Whelton B., Hutchinson A. & Skidmore C. (2006) People with learning disabilities in 'out-of-area' residential placements: 2. reasons for and effects of placement. *Journal of Intellectual Disability Research* **50**, 845–856.

Beadle-Brown J., Hutchinson A. & Mansell J. (2008) Care standards in homes for people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities* **21**, 210–218.

Beadle-Brown J., Murphy G. & DiTerlizzi M. (2009) Quality of life for the Camberwell cohort. *Journal of Applied Research in Intellectual Disabilities* **22**, 380–390.

Beadle-Brown J., Beecham J., Mansell J., Baumker T., Leigh J., Whelton R. & Richardson L. (2012a) *Outcomes and Costs of Skilled Support for People with Severe or Profound Intellectual Disability and Complex Needs.* National Institute of Health Research, London.

Beadle-Brown J., Hutchinson A. & Whelton B. (2012b) Person-centred active support-increasing choice, promoting independence and reducing challenging behaviour. *Journal of Applied Research in Intellectual Disabilities* **25**, 291–307.

Beadle-Brown J., Mansell J., Ashman B., Ockenden J., Iles R. & Whelton B. (2014) Practice leadership and active support in residential services for people with intellectual disabilities: an exploratory study. *Journal of Intellectual Disability Research* **58**, 838–850.

Behan D., Beebee J., & Dodds I. (2016) Regulating the quality of health and social care services in England: lessons for Australia. Keynote address at the 2015 Australasian Society for Intellectual Disability National Conference. *Research and Practice in Intellectual and Developmental Disabilities*. doi: 10.1080/23297018.2016.1180260.

Behan D. (in press) Regulating the quality of health and social care services in England: lessons for Australia. *Research and Practice in Intellectual and Developmental Disabilities*. doi: 10.1080/23297018.2016.1180260.

Berdiansky H. A. & Parker R. (1977) Establishing a group home for the adult mentally retarded in North Carolina. *Mental Retardation* **15**, 8–11.

Beukelman D. R. & Mirenda P. (2013) *Augmentative and Alternative Communication: Supporting Children and Adults with Complex Communication Needs*. 4th edn. Paul H. Brookes Publishing Co, Baltimore.

Bigby C. & Beadle-Brown J. (2016) Culture in better group homes for people with severe and profound intellectual disability. *Intellectual and Developmental Disabilities* **54**, 316–331.

Bigby C., Knox M., Beadle-Brown J., Clement T. & Mansell J. (2012) Uncovering dimensions of culture in underperforming group homes for people with severe intellectual disability. *Intellectual and Developmental Disabilities* **50**, 452–467.

Bigby C., Knox M., Beadle-Brown J. & Bould E. (2014) Identifying good group homes: qualitative indicators using a quality of life framework. *Intellectual and Developmental Disabilities* **52**, 348–366.

Bigby C., Knox M., Beadle-Brown J. & Clement T. (2015) 'We just call them people': positive regard as a dimension of culture in group homes for people with severe intellectual disability. *Journal of Applied Research in Intellectual Disabilities* **28**, 283–295.

Bigby C., Bould E. & Beadle-Brown J. (2016) Implementation of active support over time in Australia. Paper presented at the IASSID world congress, Melbourne, August.

Bigby C., Bould E. & Beadle-Brown J. (in press) Comparing costs and outcomes of supported living with group home in Australia: what is necessary for a good life? *Journal of Intellectual and Developmental Disability*.

Bratt A. & Johnston R. (1988) Changes in life style for young adults with profound handicaps following discharge from hospital care into a "second generation" housing project. *Mental Handicap Research* **1**, 49–74.

Butler E. & Bjaanes A. (1977) A typology of community care facilities and differential normalization outcomes. *Research to Practice in Mental Retardation: Care and Intervention* **1**, 337–347.

Clement T. & Bigby C. (2010) *Group Homes for People with Intellectual Disabilities: Encouraging Inclusion and Participation*. Jessica Kingsley Publishers, London.

Commission for Social Care Inspection & Healthcare Commission (2006) *Joint Investigation into the Provision of Services for People with Learning Disabilities at Cornwall Partnership NHS Trust*. Commission for Healthcare Audit & Inspection, London.

Croft S. E. (1999) Creating locales through storytelling: an ethnography of a group home for men with mental retardation. *Western Journal of Communication* **63**, 329–347.

Donabedian A. (1988) The quality of care: how can it be assessed? *Journal of the American Medical Association* **260**, 1743–1748.

Dowse L., Weise M. & Smith E. (2016) Workforce issues in the Australian national disability insurance scheme: complex support. *Research and Practice in Intellectual and Developmental Disabilities* **3**, 54–64.

Egli M., Feurer I., Roper T. & Thompson T. (2002) The role of residential homelikeness in promoting community participation by adults with mental retardation. *Research in Developmental Disabilities* **23**, 179–190.

Emerson E. & Hatton C. (1994) *Moving Out: The Impact of Relocation from Hospital to Community on the Quality of Life of People with Learning Disabilities*. HMSO, London.

Emerson E., Robertson J., Gregory N., Kessissoglou S., Hatton C., Hallam A., Knapp M., Järbrink K., Netten A. & Linehan C. (2000) The quality and costs of community-based residential supports and residential campuses for people with severe and complex disabilities. *Journal of Intellectual and Developmental Disability* **25**, 263–279.

Emerson E., Robertson J., Gregory N., Hatton C., Kessissoglou S., Hallam K., … Walsh P. (2001) Quality and costs of supported living residences and group homes in the United Kingdom. *American Journal on Mental Retardation* **106**, 401–415.

Emerson E., Malam S., Davies I. & Spencer K. (2005) *Adults with Learning Difficulties in England 2003/4*. Department of Health, London.

Endermann M. (2013) Predictors of health-related and global quality of life among young adults with difficult-to-treat epilepsy and mild intellectual disability. *Epilepsy & Behavior* **26**, 188–195.

Felce D. (1989a) *The Andover Project: Staffed Housing for Adults with Severe or Profound Mental Handicaps*. British Institute on Mental Handicap, Kidderminster.

Felce D. (1989b) Necessary and sufficient conditions for high quality residential services (Letter). *Mental Handicap Research* **2**, 108–109.

Felce D. & Beyer S. (1996) Making progress together: the interplay between research and services. In: *Innovations in Evaluating Services for People with Intellectual Disabilities* (ed. R. McConkey), pp. 41–60. Lisieux Hall, Whittle-le-Woods.

Felce D. & Emerson E. (2001) Living with support in a home in the community: predictors of behavioral development and household and community activity. *Mental Retardation and Developmental Disabilities Research Reviews* **7**, 75–83.

Felce D. & Perry J. (1995) The extent of support for ordinary living provided in staffed housing: the relationship between staffing levels, resident characteristics, staff: resident interactions and resident activity patterns. *Social Science & Medicine* **40**, 799–810.

Felce D. & Repp A. (1992) The behavioral and social ecology of community houses. *Research in Developmental Disabilities* **13**, 27–42.

Felce D. & Toogood S. (1988) *Close to Home: A Local Housing Service and its Impact on the Lives of Nine Adults with Severe and Profound Mental Handicaps*. BIMH Publications, Kidderminster.

Felce D., Thomas M., de Kock U., Saxby H. & Repp A. (1985) An ecological comparison of small community-based houses and traditional institutions – II. *Behaviour Research and Therapy* **23**, 337–348.

Felce D., de Kock U. & Repp A. C. (1986) An eco-behavioral analysis of small community-based houses and traditional large hospitals for severely and profoundly mentally handicapped adults. *Applied Research in Mental Retardation* **7**, 393–408.

Felce D., Grant G., Todd S., Ramcharan P., Beyer S., McGrath M., Perry J., Ramcharan P. & Shearn J. (1998) *Towards a Full Life: Researching Policy Innovation for People with Learning Disabilities*. Butterworth Heinemann, Melbourne.

Felce D., Bowley C., Baxter H., Jones E., Lowe K. & Emerson E. (2000) The effectiveness of staff support: evaluating active support training using a conditional probability approach. *Research in Developmental Disabilities* **21**, 243–255.

Felce D., Lowe K. & Jones E. (2002a) Staff activity in supported housing services. *Journal of Applied Research in Intellectual Disabilities* **15**, 388–403.

Felce D., Lowe K. & Jones E. (2002b) Association between the provision characteristics and operation of supported housing services and resident outcomes. *Journal of Applied Research in Intellectual Disabilities* **15**, 404–418.

Felce D., Jones E., Lowe K. & Perry J. (2003) Rational resourcing and productivity: relationships among staff input, resident characteristics, and group home quality. *American Journal on Mental Retardation* **108**, 161–172.

Felce D., Perry J., Romeo R., Robertson J., Meek A., Emerson E., MacLean J., … William E. (2008) Outcomes and costs of community living: semi-independent living and fully staffed group homes. *American Journal on Mental Retardation* **113**, 87–101.

Flynn M. (2006) Joint investigation into the provision of services for people with learning disabilities at Cornwall Partnership NHS Trust. *The Journal of Adult Protection* **8**, 28–32.

Fyffe C., McCubbery J. & Reid K. J. (2008) Initial investigation of organisational factors associated with the implementation of active support. *Journal of Intellectual & Developmental Disability* **33**, 239–246.

Fyson R. & Kitson D. (2007) Independence or protection – does it have to be a choice? Reflections on the abuse of people with learning disabilities in Cornwall. *Critical Social Policy* **27**, 426–436.

Gillett E. & Stenfert-Kroese B. (2003) Investigating organizational culture: a comparison of a 'High'-and a 'Low'-Performing residential unit for people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities* **16**, 279–284.

Graham H. (2005) Intellectual disabilities and socioeconomic inequalities in health: an overview of research. *Journal of Applied Research in Intellectual Disabilities* **18**, 101–111.

Grieve A., McLaren S., Lindsay W. & Culling E. (2008) Staff attitudes towards the sexuality of people with learning disabilities: a comparison of different professional groups and residential facilities. *British Journal of Learning Disabilities* **37**, 76–84.

Harrison M. (1994) *Diagnosing Organizations: Methods, Models, and Processes*. 2nd edn. Sage Publications, London.

Hastings R. P., Remington B. & Hatton C. (1995) Future directions for research on staff performance in services for people with learning disabilities. *Mental Handicap Research* **8**, 333–339.

Hatton C., Emerson E., Rivers M., Mason H., Mason L., Swarbrick R., *et al.* (1999a) Factors associated with staff stress and work satisfaction in services for people with intellectual disability. *Journal of Intellectual Disability Research* **43**, 253–267.

Hatton C., Rivers M., Mason H., Mason L., Emerson E., Kiernan C., … Alborz A. (1999b) Organizational culture and staff outcomes in services for people with intellectual disabilities. *Journal of Intellectual Disability Research* **43**, 206–218.

Hewson S. & Walker J. (1992) The use of evaluation in the development of a staffed residential service for adults with mental handicap. *Mental Handicap Research* **5**, 188–203.

Hollomotz A. & Committee T. S. (2008) 'May we please have sex tonight?' – people with learning difficulties pursuing privacy in residential group settings. *British Journal of Learning Disabilities* **37**, 91–97.

Humphreys L., Bigby C., Iacono T., Bould E. & Humphreys L. (2016) Development of a scale to measure organisational culture in group homes. *Journal of Intellectual Disability Research* **60**, 685.

Jones E., Felce D., Lowe K., Bowley C. … Kurowska K. (2001a) Evaluation of the dissemination of active support training and training trainers. *Journal of Applied Research in Intellectual Disabilities* **14**, 79–99.

Kelly C. (2010) The role of mandates/philosophies in shaping interactions between disabled people and their support providers. *Disability & Society* **25**, 1, 103–119.

Kenefick B. A. (1988) Communicative competence. In: *Community Residences for Persons with Developmental Disabilities*

(eds M. P. Janicki, M. Wyngaardwn Krauss & M. M. Seltzer), pp. 189–201. Paul H. Brookes Publishing Co, Baltimore.

King R. D., Raynes N. V. & Tizard J. (1971) *Patterns of Residential Care: Sociological Studies in Institutions for Handicapped Children*. Routledge & Kegan Paul, London.

King's Fund Centre (1980) *An Ordinary Life: Comprehensive Locally-Based Residential Services for Mentally Handicapped People*. King Edward's Hospital Fund, London.

Knox M. (2000) Family control: the views of families who have a child with an intellectual disability. *Journal of Applied Research in Intellectual Disabilities* 13, 17–28.

Kozma A., Mansell J. & Beadle-Brown J. (2009) Outcomes in different residential settings for people with intellectual disability: a systematic review. *American Journal on Intellectual and Developmental Disabilities* 114, 193–222.

Larson S., Hewitt A. & Lakin C. (2004) Multi perspective analysis of workforce challenges and their effect on consumer and family quality of life. *American Journal on Mental Retardation* 109, 481–500.

Larson S. A., Hewitt A. S. & Knoblauch B. A. (2005) Recruitment, retention, and training challenges in community human services. In: *Staff Recruitment, Retention, and Training Strategies for Community Human Service Organizations* (eds S. A. Larson & A. S. Hewitt), pp. 1–18. Paul H. Brookes Publishing Co, Baltimore.

Lelaurin K. & Risley T. R. (1972) The organization of day-care environments: "zone" versus "man-to-man" staff assignments. *Journal of Applied Behavior Analysis* 5, 225–232.

Levinson J. (2005) The group home workplace and the work of know-how. *Human Studies* 28, 57–85.

MacDonald A. & McGill P. (2013) Outcomes of staff training in positive behaviour support: a systematic review. *Journal of Developmental and Physical Disabilities* 25, 17–33.

Mansell J. (1994) Specialized group homes for persons with severe or profound mental retardation and serious problem behaviour in England. *Research in Developmental Disabilities* 15, 371–388.

Mansell J. (2006) Deinstitutionalisation and community living: progress, problems and priorities. *Journal of Intellectual and Developmental Disability* 31, 65–76.

Mansell J. & Beadle-Brown J. (2004) Person-centred planning or person-centred action? Policy and practice in intellectual disability services. *Journal of Applied Research in Intellectual Disabilities* 17, 1–9.

Mansell J. & Beadle-Brown J. (2009) Dispersed or clustered housing for adults with intellectual disability: a systematic review. *Journal of Intellectual & Developmental Disability* 34, 313–323.

Mansell J. & Beadle-Brown J. (2012) *Active Support: Enabling and Empowering People with Intellectual Disabilities*. Jessica Kingsley Publishers, London.

Mansell J. & Elliott T. (2001) Staff members' prediction of consequences for their work in residential settings. *American Journal on Mental Retardation* 106, 424–447.

Mansell J., Felce D., Jenkins J. & De Kock U. (1982) Increasing staff ratios in an activity with severely mentally handicapped people. *British Journal of Mental Subnormality* 28, 55.

Mansell J., Felce D., Jenkins J., De Kock U. & Toogood A. (1987) *Developing Staffed Housing for People with Mental Handicaps*. Costello, Tunbridge Wells.

Mansell J., McGill P. & Emerson E. (1994) Conceptualizing service provision. In: *Severe Learning Disabilities and Challenging Behaviour* (eds E. Emerson, P. McGill & J. Mansell), pp. 69–93. Chapman & Hall, London.

Mansell J., McGill P. & Emerson E. (2001) Development and evaluation of innovative residential services for people with severe intellectual disability and serious challenging behaviour. In: *International Review of Research in Mental Retardation*. Vol. 24 (ed. L. M. Glidden), pp. 245–298. Academic Press, New York.

Mansell J., Ashman B., Macdonald S. & Beadle-Brown J. (2002) Residential care in the community for adults with intellectual disability: needs, characteristics and services. *Journal of Intellectual Disability Research* 46, 625–633.

Mansell J., Beadle-Brown J., Macdonald S. & Ashman B. (2003a) Resident involvement in activity in small community homes for people with learning disabilities. *Journal of Applied Research in Intellectual Disabilities* 16, 63–74.

Mansell J., Beadle-Brown J., Macdonald S. & Ashman B. (2003b) Functional grouping in residential homes for people with intellectual disabilities. *Research in Developmental Disabilities* 24, 170–182.

Mansell J., Beadle-Brown J., Ashman B. & Ockenden J. (2004) *Person-Centred Active Support: A Multi-Media Training Resource for Staff to Enable Participation, Inclusion and Choice for People with Learning Disabilities*. Pavilion Publishing (Brighton) Ltd, Brighton.

Mansell J., Beadle-Brown J., Whelton B., Beckett C. & Hutchinson A. (2008) Effect of service structure and organization on staff care practices in small community homes for people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities* 21, 398–413.

Mansell J., Beadle-Brown J., Netten A. & Towers A. (2010) *Economies and diseconomies of scale in services for people with intellectual disabilities*. Paper Presented at 3rd IASSID-Europe congress, Rome 20–22nd October 2010. Abstract published in Journal of Applied Research in Intellectual Disabilities, 25, p. 486.

Mansell J., Beadle-Brown J. & Bigby C. (2013) Implementation of active support in Victoria, Australia: an exploratory study. *Journal of Intellectual and Developmental Disability* 38, 48–58.

McGill P. (2014) Preventing challenging behaviour of adults with complex needs in supported accommodation. Seminar presentation, Retrieved on 25 February 2016 from http://www.kent.ac.uk/tizard/news/?view=873

McGill P. & Mansell J. (1995) Community placements for people with severe and profound learning disabilities and serious challenging behaviour: individual illustrations of

issues and problems. *Journal of Mental Health* [Online] **4**, 183–198.

Mead G. H. (1923) Scientific method and the moral sciences. *The International Journal of Ethics* **33**, 229–247.

Mitchell D. (2010) If we have got it wrong for people with learning disabilities, have we got it wrong for other people as well? In: *Understanding and Promoting Access for People with Learning Difficulties: Seeing the Opportunities and Challenges of Risk* (eds J. Seale & M. Nind), pp. 143–153. Routledge, London.

Neely-Barnes S., Graff J. C., Marcenko M. & Weber L. (2008) Family decision making: benefits to persons with developmental disabilities and their family members. *Intellectual and Developmental Disabilities* **46**, 93–105.

Netten A., Beadle-Brown J., Trukeschitz B., Towers A., Welch E., Forder J., … Alden E. (2010) *Measuring the Outcomes of Care Homes: Final Report*. Personal Social Services Research Unit, University of Kent, Canterbury.

Nind M. & Hewett D. (2006) *Access to Communication*. 2nd edn. David Fulton, London.

O'Brien J. & Lyle O'Brien C. (2002) The Origins of person-centred planning: A community of practice perspective In J. O'Brien & C. Lyle O'Brien (Eds), Implementing person-centre planning: Voices of experience: Vol. 11 (pp. 25–58). Inclusion Press.

Ockenden J., Ashman B. & Beadle-Brown J. (2014) Active support–fundamental to positive behaviour support. *Research and Practice in Intellectual and Developmental Disabilities* **1**, 98–107.

O'Neil S. & Hewitt A. (2005) Linking training and performance through competency-based training. In: *Staff Recruitment, Retention, and Training Strategies for Community Human Service Organizations* (eds S. A. Larson & A. S. Hewitt), pp. 125–143. Paul H. Brookes Publishing Co, Baltimore.

Ouellette-Kuntz H. (2005) Understanding health disparities and inequities by individuals with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities* **18**, 113–121.

Owen K., Hubert J. & Hollins S. (2007) Moving home: the experiences of women with severe intellectual disabilities in transition from a locked ward. *British Journal of Learning Disabilities* **36**, 220–226.

Parmenter T. & Arnold S. (2008) *Disability Accommodation and Support Framework Report*. Centre for Developmental Disability Studies, Sydney.

Pawson R., Greenhalgh T., Harvey G. & Walshe K. (2005) Realist review–a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy* **10**(Suppl 1), 21–34.

Perry J. & Felce D. (2005) Factors associated with outcome in community group homes. *American Journal on Mental Retardation* **110**, 121–135.

Perry J., Allen D. G., Pimm C., Meek A., Lowe K., Groves S., … Felce D. (2013) Adults with intellectual disabilities and challenging behaviour: the costs and outcomes of in-and out-of-area placements. *Journal of Intellectual Disability Research* **57**, 139–152.

Petry K., Maes B. & Vlaskamp C. (2009) Measuring the quality of life of people with profound multiple disabilities using the QOL-PMD: first results. *Research in Developmental Disabilities* **30**, 1394–1405.

Race D. (2007) *Intellectual Disability: Social Approaches: Social Approaches*. McGraw-Hill Education, Maidenhead, Berkshire, UK.

Rapley M. & Hopgood L. (1997) Quality of life in a community-based service in rural Australia. *Journal of Intellectual and Developmental Disability* **22**, 125–141.

Robertson J., Emerson E., Hatton C., Gregory N., Kessissoglou S., Hallam A. & Walsh P. N. (2001) Environmental opportunities and supports for exercising self-determination in community-based residential settings. *Research in Developmental Disabilities* **22**, 487–502.

Robertson J., Emerson E., Pinkney L., Caesar E., Felce D., Meek A., Carr D., Lowe K., Knapp M. & Hallam A. (2002) *Quality and Costs of Community-Based Residential Supports for People with Learning Disabilities and Challenging Behaviour*. University of Lancaster, Lancaster.

Robertson J., Emerson E., Hatton C., Elliott J., McIntosh B., Swift P., Krinjen-Kemp E., Towers C., Romeo R., Knapp M., Sanderson H., Routledge M., Oakes P. & Joyce T. (2005) *The Impact of Person Centred Planning*. Institute for Health Research, Lancaster University, Lancaster, UK.

Rossow-Kimball B. & Goodwin D. (2009) Self-determination and leisure experiences of women living in two group homes. *Adapted Physical Activity Quarterly* **26**, 1–20.

Saloviita T. & Åberg M. (2000) Self-determination in hospital, community group homes, and apartments. *The British Journal of Development Disabilities* **46**, 23–29.

Saxby H., Thomas M., Felce D. & de Kock U. (1986) The use of shops, cafes and public houses by severely and profoundly mentally retarded adults. *British Journal of Mental Subnormality* **32**, 82–92.

Schalock R. L. (2011) The measurement and use of quality of life-related personal outcomes. In: *Enhancing the Quality of Life of People with Intellectual Disabilities: From Theory to Practice* (ed. R. Kober), pp. 3–16. Springer Netherlands, Dordrecht.

Schalock R., Brown I., Brown R., Cummins R. A., Felce D., Matikka L., et al. (2002) Conceptualization, measurement, and application of quality of life for persons with intellectual disabilities: report of an international panel of experts. *Mental Retardation* **40**, 457–470.

Singer J. (1999) 'Why can't you be normal for once in your life?' From a 'problem with no name' to the emergence of a new category of difference. In: *Disability Discourse* (eds M. Corker & S. French), pp. 59–67. Open University Press, Buckingham.

Singh N. N., Lancioni G. E., Winton A. S., Singh A. N., Adkins A. D. & Singh J. (2009) Mindful staff can reduce the use of physical restraints when providing care to individuals with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities* **22**, 194–202.

Smull M. & Sanderson H. (2005) *Essential Lifestyle Planning for Everyone*. HSA Press, The Learning Community, Stockport.

Stancliffe R. J. (1997) Community living – unit size, staff presence, and residents' choice-making. *Mental Retardation* **35**, 1–9.

Stancliffe R. & Keene S. (2000) Outcomes and costs of community living: a matched comparison of group homes and semi-independent living. *Journal of Intellectual and Developmental Disability* **25**, 281–305.

Stancliffe R. J. & Lakin K. C. (1998) Analysis of expenditures and outcomes of residential alternatives for persons with developmental disabilities. *American Journal on Mental Retardation* **102**, 552–568.

Stancliffe R. J., Abery B. H. & Smith J. (2000) Personal control and the ecology of community living settings: beyond living-unit size and type. *American Journal on Mental Retardation* **105**, 431–454.

Stancliffe R., Emerson E., & Lakin C. (2004). Residential supports. In *International handbook of applied research in intellectual disabilities* (eds. E. Emerson, C. Hatton, T. Thompson, T. Parmenter), pp 459–478. Chicester, UK: Wiley.

Stancliffe R. J., Harman A. D., Toogood S. & McVilly K. R. (2007) Australian implementation and evaluation of active support. *Journal of Applied Research in Intellectual Disabilities* **20**, 211–227.

Stancliffe R. J., Harman A. D., Toogood S. & McVilly K. R. (2008) Staff behaviour and resident engagement before and after active support training. *Journal of Intellectual and Developmental Disability* **33**, 257–270.

Stancliffe R. J., McVilly K. R., Radler G., Mountford L. & Tomaszewski P. (2010) Active support, participation and depression. *Journal of Applied Research in Intellectual Disabilities* **23**, 312–321.

Stevenson H. (2010) Practitioner leadership: how do we realise the potential within? In: *Leadership in Social Care* (ed. Z. van Zwanenberg), pp. 27–38. Jessica Kingsley Publishers, London.

Test D., Mazzotti V., Mustian A., Fowler C., Kortering L. & Kohler P. (2009) Evidence-based secondary transition predictors for improving post-school outcomes for students with disabilities. *Career Development for Exceptional Individuals* **32**, 160–181.

Thomas D., Firth H. & Kendall A. (1978) *ENCOR – A Way Ahead*. Campaign for Mentally Handicapped People, London.

Thompson T., Robinson J., Dietrich M., Farris M. & Sinclair V. (1996) Architectural features and perceptions of community residences for people with mental retardation. *American Journal of Mental Retardation* **101**, 292–314.

Toogood S. (2008) Interactive training. *Journal of Intellectual and Developmental Disability* **33**, 215–224.

Tossebro J. (1995) Impact of size revisited: relation of number of residents to self-determination and deprivatization. *American Journal on Mental Retardation* **100**, 59–67.

Totsika V., Toogood S., Hastings R. P. & McCarthy J. (2010) The effect of active support interactive training on the daily lives of adults with an intellectual disability. *Journal of Applied Research in Intellectual Disabilities* **23**, 112–121.

Tyne A. (1981) *Staffing and Supporting a Residential Service, a Paper Given to the European Conference on Habitat and Living Environment for Adult Persons with Mental Handicaps*. The Campaign for Mentally Handicapped People, London.

United Nations (2006) *Convention on the Rights of Persons with Disabilities*. United Nations, Geneva, Switzerland.

Vorhaus J. (2005) Citizenship, competence and profound disability. *Journal of Philosophy of Education* **39**, 461–475.

Vos P., De Cock P., Petry K., Van Den Noortgate W. & Maes B. (2010) What makes them feel like they do? Investigating the subjective well-being in people with severe and profound disabilities. *Research in Developmental Disabilities* **31**, 1623–1632.

Walsh P. N., Emerson E., Lobb C., Hatton C., Bradley V., Schalock R. L. & Moseley C. (2010) Supported accommodation for people with intellectual disabilities and quality of life: an overview. *Journal of Policy and Practice in Intellectual Disabilities* **7**, 137–142.

Wolfensberger W. & Glenn L. (1975) *Pass 3. Program Analysis Al Service System: A Method for the Quantitative Evaluation Al Human Services. Handbook*. National Institute on Mental Retardation, Toronto.