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# Implementation of active support over time in Australia

Christine Bigby [a], Emma Bould [a] and Julie Beadle-Brown [a,b]

[a]Living with Disability Research Centre, La Trobe University, Melbourne, Australia; [b]Tizard Centre, University of Kent, Kent, UK

**ABSTRACT**

**Background:** Research indicates the value of active support in achieving good outcomes across a number of quality of life domains for people with intellectual disabilities. However, implementation is not easy, and little research has explored why. We aimed to identify some of the factors that impact on implementation of active support in supported accommodation services.

**Methods:** Data on the quality of active support, staff training and practice leadership were collected through staff questionnaires, observations and manager interviews, for between two and four years across six organisations.

**Results:** Active support improved over time for more able people with intellectual disability, but not for people with higher support needs. There was a weak positive correlation between active support and (1) practice leadership scores, and (2) the percentage of staff reporting active support training.

**Conclusions:** It is important to recognise the influence of practice leadership and staff training on the quality of support and ensure provision for these in funding schemes.

**KEYWORDS**
Implementation; engagement; active support; practice leadership; training; supported accommodation



"Active support" is an enabling relationship between staff or other carers and the people they support that provides just the right amount of assistance to enable a person to successfully participate in meaningful activities and social relationships, at home and in the community (Mansell & Beadle-Brown, 2012). It is a way of working that can apply at all times and for all people with intellectual disability. The evidence base 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. Studies of effectiveness have ranged from small-scale pre-post training comparisons through to larger scale observational studies (see Bigby & Beadle-Brown, 2016; Jones, Felce, Lowe, Bowley, Pagler, Gallagher, et al., 2001; Jones, Felce, Lowe, Bowley, Pagler, Strong, et al., 2001; Mansell & Beadle-Brown, 2012).

The consistent finding is that when well implemented, active support improves outcomes for people with intellectual disabilities across a number of domains: time spent engaged in meaningful activities and social interactions (Beadle-Brown, Hutchinson, & Whelton, 2012; Felce et al., 2000; Felce, de Kock, & Repp, 1986; Felce, Lowe, & Jones, 2002; Felce & Perry, 1995; Jones et al., 1999; Mansell, 1994; Mansell, Beadle-Brown, & Bigby, 2013; Mansell, Beadle-Brown, Macdonald, & Ashman, 2003; Mansell, Beadle-Brown, Whelton, Beckett, & Hutchinson, 2008; Thompson, Robinson, Dietrich, Farris, & Sinclair, 1996), participation in household and community-based activities (Jones, Felce, Lowe, Bowley, Pagler, Gallagher, et al., 2001; Stancliffe, Harman, Toogood, & McVilly, 2007), improved skills (Felce et al., 1986; Mansell, Ashman, Macdonald, & Beadle-Brown, 2002; Mansell, McGill, & Emerson, 2001), improved choice (Beadle-Brown, Hutchinson, et al., 2012), reduced challenging behaviour (Beadle-Brown, Hutchinson, et al., 2012; Jones et al., 2013; Koristsas, Iacono, Hamilton & Leighton, 2008; Stancliffe, McVilly, Radler, Mountford, & Tomaszewski, 2010), and mental health issues such as depression (Stancliffe et al., 2007). In a 2012 study, Beadle-Brown, Beecham, et al. (2012) confirmed earlier research and demonstrated no differences in hours of staff or overall costs of care in services where active support was stronger compared to those where it was weaker. Finally, regression studies looking at predictors of engagement in meaningful activities have identified two variables as most important (and in most studies, the only) – the level of ability of the individuals supported and assistance from staff (Felce et al., 2000; Felce et al., 1986; Felce et al., 2002; Felce & Perry, 1995; Jones, Felce, Lowe, Bowley, Pagler, Strong, et al., 2001; Jones et al., 1999; Mansell, 1994; Mansell et al., 2003; Mansell et al., 2008; Smith, Felce, Jones, & Lowe, 2002; Thompson et al., 1996). When active support is well implemented the effect of

**CONTACT** Christine Bigby c.bigby@latrobe.edu.au

adaptive ability on engagement reduces (Mansell & Beadle-Brown, 2012, Chapter 3).

Implementation and maintenance of active support has proved challenging (Mansell & Beadle-Brown, 2012). As Mansell et al. (2008) reported factors such as (1) setting characteristics (type of setting and size), (2) staffing (e.g., staff ratio, staff qualifications and experiences, staff turnover, and staff attitudes), (3) organisation hygiene (e.g., staff job satisfaction, stress, role conflict, and role clarity), and (4) general management (e.g., the autonomy of managers or the systems available for organising support) have not been consistently found to predict good support. Similar to Hastings (1995), Mansell et al. (2008) noted that factors influencing staff practice were likely to work in combination. For example, while training staff in active support improves the quality of support and outcomes for people supported this needs to happen by combining classroom and hands-on training (Jones, Felce, Lowe, Bowley, Pagler, Gallagher, et al., 2001; Jones, Felce, Lowe, Bowley, Pagler, Strong, et al., 2001) and in the context of ongoing management commitment and support (McGill & Toogood, 1994).

Mansell et al. (2008) found that most structural, organisational, and managerial factors were only weakly associated with good staff performance and that higher active support scores were predicted by a range of individual items in combination including higher resident adaptive behaviour and having more experienced staff, who received supervision more than annually. They went on to suggest that some management practices may be more important, particularly the role of front-line managers as practice leaders. Beadle-Brown et al. (2014) and Beadle-Brown, Bigby, and Bould (2015) explored the role of practice leadership using both staff self-rated measures and an observed measure of practice leadership, finding significant relationships between the quality of practice leadership available to staff and the level of active support. This was especially so in the presence of good general management (Beadle-Brown et al., 2014).

However, despite many other hypotheses about what supports implementation and maintains good active support, most notably the role of culture, there is very little research exploring these (Bigby & Beadle-Brown, 2016). The ongoing project from which the data in this paper are drawn is attempting to fill that gap by exploring the organisational factors that impact on implementation and maintenance of active support. This large scale study involves fourteen organisations in five Australian states. It has two components: (1) a representative sample of services selected every year for five years to allow substantial inferential analysis on data from over 500 people with intellectual disabilities and (2) a longitudinal cohort study following the same service users in 6 organisations over at least a five-year period (seven years for some organisations involved in the pilot study reported in Mansell et al. (2013).

This paper presents interim data on a sub-set of variables related to active support from the study's longitudinal element, expanding data presented for four of the organisations in Mansell et al. (2013) by two more years and introducing data from another two organisations. It focuses primarily on engagement, active support, practice leadership and staff training, and explores the changes over time. The paper is primarily descriptive, aiming to identify some of the implementation issues experienced in supported accommodation services[1] and consider some of the factors that will need to be explored in future analysis of the data when the study is completed.

**Table 1.** Size of each organisation and number of years since active support first implemented at time of Year 4 data collection.

| | Total number of supported accommodation services provided | Total number of people supported | Number of years implementing active support |
|---|---|---|---|
| Org 1 | 5 | 23 | 6 |
| Org 2 | 16 | 33 | 12 |
| Org 3 | 5 | 18 | 11 |
| Org 4 | 34 | 159 | 10 |
| Org 5 | 7 | 29 | 3 |
| Org 6 | 9 | 53 | 4 |

## Method

### Design

The study is longitudinal, following a cohort of services from six organisations. The same measures are reported for each time point. Data are available for four years (2009–2012) for three organisations, three years (2009, 2010, 2012) for one organisation, and two years (2011–2012) for two organisations. The study received ethical approval from Human Research Ethics Committee of La Trobe University.

### Organisations

Details of the six organisations that all operated in one state and were not-for-profit agencies are presented in Table 1. As shown, size varied from 5 to 34 services and organisations had been implementing active support for different periods of time, some for longer than 10 years.

### Services and participants

Depending on size, all or a sub-set of services were included in the study providing at least one of the people

supported and the staff that worked with that person gave consent. Some additional services were included in Year 3 for Organisations 2 and 3, and no data were collected in Year 3 for Organisation 4. Table 2 presents data on the number of services and people with intellectual disabilities who participated in each year. The fluctuation from year to year was due to service user movement (people leaving and/or new people moving into a service), lack of consent or illness; however, the percentage of people consenting from the services increased each year (range 76–97%).

## Measures

### Service user needs and characteristics

A measure of service user needs and characteristics was obtained by questionnaires completed by a staff member who knew the individual well. These questionnaires included the short form of the Adaptive Behavior Scale (SABS) Part 1 (Hatton et al., 2001), the Aberrant Behavior Checklist (ABC) (Aman, Burrow, & Wolford, 1995), and the Quality of Social Impairment question from the Schedule of Handicaps Behaviours and Skills (HBS) (Wing & Gould, 1978). Additional questions related to gender, date of birth, and other disabilities present. The reliability and validity of the ABS (from which the SABS was drawn), ABC, and the HBS have been studied and reported as acceptable by their authors. The full-scale score for Part 1 of the Adaptive Behaviour Scale which is presented was estimated from the SABS using the formula provided in Hatton et al. (2001). For some analyses, participants were categorised according to their ABS score (151 and above, and below 151) to compare those with more severe disabilities to those with less severe disabilities. This relatively crude measure has been shown to differentiate samples in terms of outcomes and the quality of support (Beadle-Brown et al., 2015; Mansell et al., 2013).

### Engagement in meaningful activity

The momentary time-sampling measure of engagement in meaningful activities and relationships (EMAC-R) (Mansell & Beadle-Brown, 2005) was the main measure of service user outcomes. Observers coded both social and non-social activities (self-care, household or work, audio-visual or leisure), assistance and other contact from staff, contact from other service users, and challenging behaviour (self-stimulatory, self-injurious, aggressive or destructive, or other challenging behaviour). This measure is described in detail in other papers (Beadle-Brown, Hutchinson, et al., 2012; Mansell et al., 2013). Observations were carried out in each house usually over a two-hour period between 1600 hours and 1800 hours. A one-minute interval was used and each service user was observed for five minutes in rotation.

Observations were collected by a team of seven observers in Year 1, and two of those observers completed the observations in Year 2. In Year 3, all observations were conducted by just one observer (second author) and in Year 4, there was a team of three observers. All observers were trained by the authors. Across the four years, 54% of observations were completed by one person (second author).

Observers were given classroom-based training that included observer discipline, the nature of engagement, and practice observations using video clips that illustrated observational categories. They also conducted *in situ* observations with the second or third author, during which reliability was checked after an hour and issues discussed. A further hour of observation was conducted together, reliability checked and the ASM completed. Reliability of the ASM was checked and issues discussed. Each observer did at least one further buddy observation with the main observer (second author).

Inter-observer reliability was used to ascertain the degree of agreement among the seven observers involved in Year 1 (and the two observers in Year 2). Reliability data were available for 1120 minutes across the observers and the mean kappa was 0.58 (range 0.11–0.82). As discussed in detail in Mansell et al. (2013), agreement was low for unclear non-social activity and assistance. Unclear non-social activity was only observed for 12 people, and when excluded from the analysis the kappa was 0.68. Assistance occurred 10% or less of the time for 91% of the sample (non-occurrence reliability was 95%), and when the kappa analysis was repeated for the 240 minutes of reliability data available for the two main observers there was 100% agreement that no unclear non-social activity and assistance occurred. Furthermore, contact was only recorded three times by either observer, and the kappa across the five remaining categories was 0.83 (range 0.78–0.92).

In Year 3 all observations were conducted by the second author, and inter-observer reliability on the EMAC-R was checked with the third author before data collection began and shown to be high (kappa 0.81 over 88 minutes of observations). Across the team of three observers in Year 4, inter-observer reliability data were available for 720 minutes. Mean kappa value across the 13 categories which were coded as happening at least once was 0.92 (range 0.77–1.00).

### Quality of active support

The Active Support Measure (ASM) has been described in detail in other published papers (Beadle-Brown,

**Table 2.** Number of services included and number of people consenting to participate in each organisation at each time point, plus average observed staff: client ratio at each time point for each organisation.

| | | Yr 1 | | Yr 2 | | Yr 3 | | Yr 4 | |
|---|---|---|---|---|---|---|---|---|---|
| | Average observed staff: client ratio | No. of service users | No. of services | No. of service users | No. of services | No. of service users | No. of services | No. of service users | No. of services |
| Org 1 | .51 | 20 | 5 | 19 | 5 | 20 | 5 | 19 | 5 |
| Org 2 | .52 | 12 | 3 | 15 | 6 | 17 | 7 | 18 | 7 |
| Org 3 | .52 | 12 | 4 | 12 | 4 | 17 | 5 | 18 | 5 |
| Org 4 | .47 | 29 | 6 | 35 | 10 | – | – | 34 | 8 |
| Org 5 | .70 | – | – | – | – | 25 | 7 | 24 | 7 |
| Org 6 | .39 | – | – | – | – | 31 | 8 | 33 | 8 |
| ALL | .52 | 70 | 19 | 81 | 25 | 110 | 32 | 146 | 41 |

Hutchinson, et al., 2012; Mansell et al., 2013). It was used to determine the quality of active support provided by staff, and completed at the end of the 2-hour observation period for each service user observed. The ASM includes 15 items focusing on the opportunities for involvement and the skills with which staff provided and supported those opportunities. Each item is rated on a scale of 0 (poor, inconsistent support or performance) to 3 (good, consistent support or performance). The maximum possible score is 45 and for each person a percentage of the maximum was calculated. Percentage scores for each individual were categorised according to Mansell and Beadle-Brown (2012, Chapter 3), into strong, consistent implementation of active support (more than 66.66%), mixed implementation (between 33.33% and 66.66%), and weak implementation (less than 33.33%). Percentage agreement across the 15 items of the measure for the 7 Year 1 observers (and the 2 Year 2 observers) was 60% on average (range 29–98%, $n = 24$). Kappa was on average 0.32 (discussed in detail in Mansell et al., 2013). Reliability on the ASM was not conducted in Year 3 due to all observations being conducted by one observer. Across the team of three observers in Year 4, percentage observer agreement was 84% on average (range 73–100%, $n = 15$). Kappa was on average 0.61 (range 0.21–0.80).

### Staff training in active support

Support workers were asked to complete an adapted version of the Staff Experiences and Satisfaction Questionnaire (Beadle-Brown, Gifford, & Mansell, 2005). This includes questions on staff characteristics, training, and experience as well as knowledge of active support, person-centred planning, whether staff receive practice leadership, involvement of senior management and other motivational structures. In this paper, we present the results from the training section of the staff questionnaire.

### Practice leadership

The Observed Measure of Practice Leadership, which has been shown to be a reliable and valid measure with good internal consistency, inter-rater reliability, and construct validity (see Beadle-Brown et al., 2015), was used to collect the data on the quality of practice leadership provided by front-line managers. Observers rated five core aspects of practice leadership: (1) Overall focus on the quality of life (QoL) of the people supported by the service; (2) Allocating and organising staff to provide the support people need to maximise their QoL; (3) Coaching, observing, modelling and giving feedback to staff about the quality of their support; (4) Reviewing performance with individual staff in supervision; and (5) Reviewing team performance in team meetings. Ratings were made on a five-point rating scale (with 1 being no or almost no evidence of the element being in place to 5 being excellent – could not really improve on this element), on the basis of information from: (1) unstructured observations of the front-line manager during the visit to the service; (2) semi-structured interviews with the front-line manager and where possible, with direct support staff, and (3) review of paperwork associated with practice leadership such as staff allocation and minutes of team meetings. Interviews with front-line managers lasted approximately one hour, all interviews were digitally recorded, and detailed field notes were written as soon as possible after each visit to assist in rating the five items. Data for the practice leadership measure were collected by four observers who had been trained by one of the authors and conducted at least two visits with one other trained observer before collecting data alone.

### Procedure

Once consent had been gained, the service user questionnaires were sent to each service with requests for a staff member who knew the individual well to complete and return to the research team using the pre-paid envelopes provided. The staff questionnaires were mailed to supervisory and managerial staff associated with each house who were asked to give a copy to each consenting member of staff, along with a pre-paid envelope so that staff could post them back to the research team. A researcher visited each service to conduct the observations using the

EMAC-R measure at the end of which the ASM was completed for each person. The observation to complete the EMAC-R and the observed measure of practice leadership were carried out on different days and by different researchers. Thus, each service had two visits (exception being when a practice leader worked across more than one service, and only one interview and observation were conducted in one of those services), usually within two months of each other although in four services, circumstances meant there was a longer gap of three to four months.

### Analysis

Descriptive statistics are presented for the overall sample and for each organisation as a whole for each time point. In addition, correlation analysis was used to look at the relationship between level of adaptive behaviour and the level of engagement and quality of active support.

For those individuals who participated at more than one time point, exploratory analysis examined changes over time using Wilcoxon Signed ranks tests for two time point comparisons and effect sizes ($r$) were calculated using the methodology of Fritz, Morris, and Richler (2012), by converting $z$ into $r$ using the formula $r =$ the absolute value of ${}_{y}z \div \sqrt{N - \text{Ties}}$. Friedman Analysis of Variance was used for comparison of more than two time points. Indicative differences between organisations were explored using Mann–Whitney $U$ tests, and effect sizes calculated using the Fritz et al. (2012) methodology. Univariate linear regression was used to explore the impact of level of ability on both engagement and on the quality of active support. Bonferroni adjustments were used in order to reduce the risk of Type II errors and significance reported at $p < .001$ ($\alpha_{\text{altered}} = .05 \div 50$).

## Results

### Description of participants and settings

Tables 3–6 included service users' characteristics by year and organisation. As can be seen, they had a varied profile of needs and characteristics, with some variation across years due to service user movement. On average the sample was relatively able compared to other studies of active support (Mansell et al., 2013), and just over half the sample (53%) fell below ABS 151.

As Table 6 shows, all the organisations apart from Organisation 3 included at least some people with severe or profound disabilities. Compared to other organisations, the sample of people from Organisation 3 was more able and did not include any one with a physical disability, whereas the sample from Organisation 5 only included people with severe or profound intellectual disabilities and complex needs all of whom had a physical disability and severe communication impairments (see Table 5).

**Table 3.** Participant mean age (with range) for the sample in each year and each organisation.

| | Age (mean and range) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Org 1 | Org 2 | Org 3 | Org 4 | Org 5 | Org 6 | All |
| Yr 1 | 39 (27–59) | 39 (23–54) | 44 (26–63) | 36 (22–60) | – | – | 39 (22–63) |
| Yr 2 | 40 (30–61) | 41 (22–59) | 44 (29–64) | 37 (20–61) | – | – | 40 (20–64) |
| Yr 3 | 39 (16–62) | 41 (24–60) | 42 (29–65) | – | 27 (18–42) | 52 (31–76) | 41 (16–76) |
| Yr 4 | 40 (17–63) | 42 (25–61) | 45 (30–66) | 40 (24–62) | 28 (19–43) | 52 (32–77) | 42 (17–77) |

### QoL – engagement

Observational data were available for 70 people in Year 1, 81 in Year 2, 110 in Year 3, and 146 in Year 4.

Figure 1 shows the levels of any engagement, social activity, non-social activity and challenging behaviour across the whole sample. Table 6 presents the overall levels of engagement for each organisation, along with the levels of adaptive behaviour, at each time point, as it is important that the engagement data are interpreted with ability levels in mind. The dip in engagement overall in Years 3 and 4 is accounted for by the addition of Organisation 5, which supports people with profound and multiple disabilities and had only started to implement active support two years previously. If we remove Organisation 5, then engagement across the other five organisations increased to 56% and 53% in Years 3 and 4, respectively, and average ABS score increases to above 155.

Table 7 compares the overall level of engagement in Year 4 for each organisation to the figures reported in Mansell and Beadle-Brown (2012) taking into account average ability level of the group. As Table 7 shows engagement levels, for most organisations, fell below those that have been shown to be possible with good implementation of active support. Notably, however, some organisations have at least one person at the top end of the range for engagement. Engagement levels did not change significantly for the 26 people who were included at all 4 time points ($X^2(3) = 3.957$, $p = .266$), neither did they change for the 87 people included at both Years 3 and 4 ($z = 1.424$, $p = .154$, $r = .15$).

The absence of change is not necessarily a negative finding, because for some people the time spent in more complex activities increased which may indicate staff were providing more support to ensure success resulting in less engagement overall. Some people spent

**Table 4.** Participant characteristics: score on aberrant behaviour checklist (mean and range) and gender distribution in each year and by organisation.

| | ABC score (mean and range) | | | | | | | Percentage male | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Org 1 | Org 2 | Org 3 | Org 4 | Org 5 | Org 6 | ALL | Org 1 | Org 2 | Org 3 | Org 4 | Org 5 | Org 6 | ALL |
| Yr 1 | 41 (0–93) | 14 (0–47) | 28 (0–64) | 45 (4–103) | – | – | 35 (0–103) | 40% | 42% | 82% | 69% | – | – | 58% |
| Yr 2 | 25 (5–92) | 19 (4–59) | 30 (0–65) | 38 (4–102) | – | – | 31 (0–102) | 37% | 33% | 75% | 57% | – | – | 51% |
| Yr 3 | 33 (3–87) | 27 (2–110) | 21 (0–81) | – | 17 (0–77) | 18 (0–57) | 22 (0–110) | 25% | 29% | 59% | – | 68% | 39% | 45% |
| Yr 4 | 31 (3–87) | 27 (2–110) | 22 (0–81) | 34 (0–87) | 15 (0–42) | 18 (0–57) | 25 (0–110) | 26% | 33% | 56% | 47% | 67% | 39% | 45% |

less time, for example, watching TV or simple self-care activities such as eating and drinking and more time doing household activities. For example, the engagement level for one individual in Organisation 5 (with an ABS score of 31), decreased from 71% to 57%, reflecting a reduction from 69% to 11% time in audio-visual activities, and increased from 0% to 34% in more active leisure activities, 0% to 3% in simple household or work activities and 0% to 3% in activities using gas or electrical equipment.

Despite the overall decreases in engagement, 15 people were spending more time in household or work activities, 5 of whom were also spending at least slightly more time in activities involving gas or electrical equipment. However, this was by no means the case for everyone in the sample. For example, seven of those who showed overall decreases in engagement only experienced increased time spent in audio-visual activities.

As most previous studies have found, there was a significant correlation between the level of adaptive behaviour and the level of engagement overall for Years 2 ($\rho = .533$, $n = 72$, $p < .001$), 3 ($\rho = .722$, $n = 102$, $p < .001$) and 4 ($\rho = .765$, $n = 130$, $p < .001$). According to Cohen's (1988) guidelines for interpreting coefficients (see Dunst & Hamby, 2012; Lipsey & Wilson, 2001), these are all large effect sizes, and show an increase over time. Further exploration of Year 1 data showed that some of those who were more able were experiencing almost no engagement (often staff were stopping them getting engaged) and a very small number of those with more severe disabilities were very engaged.

### *Quality of support*

In terms of the amount of facilitative support provided by staff, over half (52%) of the sample in Year 4 received no assistance at all to be engaged and only 9% received assistance 14% or more of the time – the benchmark for good support used in Mansell and Beadle-Brown (2012).

The quality of support, measured by the ASM, is as important, if not more so, than the amount of assistance received. As can be seen from Figure 2 and Table 8, active support levels had improved in all but one organisation (Organisation 2). Although there was no change over time for the 25 people who were involved in all four years ($X^2(3) = 4.616$, $p = .202$), Organisation 1 showed a non-significant increase in active support from Year 2 onwards ($X^2 = 13.38$, $p = .004$) and Organisations 1, 5, and 6 showed non-significant increases between Years 3 and 4 ($z = 3.127$, $p = .002$; $z = 2.979$, $p = .003$, $z = 2.015$, $p = .044$, respectively). The level of active support had deteriorated over time for Organisation 2, but due to the small sample (only five people were included at all four time points) this change was not significant ($X^2(3) = 11.449$, $p = .01$). As Table 9 shows, by Year 4 half of the overall sample were receiving good active support (>66.6% score on ASM), but this was mainly accounted for by two organisations (Organisations 1 and 6) (see Table 9).

Unlike other studies, active support was not the variable most highly correlated with engagement. The partial correlation between ASM and engagement (controlling for adaptive behaviour) in this sample in Year 4 was

**Table 5.** Participant characteristics – physical disability and communication difficulties.

| | % with a physical impairment | | | | | | | % non-verbal | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Org 1 | Org 2 | Org 3 | Org 4 | Org 5 | Org 6 | All | Org 1 | Org 2 | Org 3 | Org 4 | Org 5 | Org 6 | All |
| Yr 1 | 35% | 42% | 0% | 23% | – | – | 26% | 37% | 0% | 25% | 12% | – | – | 19% |
| Yr 2 | 26% | 40% | 0% | 27% | – | – | 27% | 24% | 21% | 25% | 34% | – | – | 28% |
| Yr 3 | 15% | 41% | 0% | – | 100% | 36% | 42% | 30% | 24% | 12% | – | 100% | 10% | 36% |
| Yr 4 | 16% | 39% | 0% | 29% | 100% | 30% | 37% | 26% | 22% | 11% | 30% | 100% | 9% | 33% |

**Table 6.** Mean engagement (with range) in meaningful activities over time and by organisation with mean level of adaptive behaviour (and range).

| | | Org 1 | Org 2 | Org 3 | Org 4 | Org 5 | Org 6 | All |
|---|---|---|---|---|---|---|---|---|
| Yr 1 | *Adaptive behaviour score* | *142 (57–253)* | *175 (48–253)* | *167 (74–239)* | *170 (64–234)* | – | – | *163 (48–253)* |
| | Engagement | 58% (4–100) | 63% (0–100) | 59% (17–95) | 44% (0–100) | | | 53% (0–100) |
| Yr 2 | *Adaptive behaviour score* | *149 (48–258)* | *155 (62–258)* | *163 (64–272)* | *155 (48–277)* | – | – | *155 (48–277)* |
| | Engagement | 56% (0–100) | 61% (20–94) | 55% (5–100) | 58% (0–100) | | | 58% (0–100) |
| Yr 3 | *Adaptive behaviour score* | *140 (34–260)* | *157 (50–253)* | *170 (76–263)* | – | *45 (22–79)* | *171 (57–239)* | *134 (22–263)* |
| | Engagement | 52% (0–94) | 64% (27–93) | 55% (12–98) | – | 16% (0–73) | 59% (0–92) | 48% (0–98) |
| Yr 4 | *Adaptive behaviour score* | *145 (34–260)* | *160 (50–253)* | *172 (76–263)* | *147 (36–249)* | *45 (22–79)* | *174 (57–251)* | *141 (22–263)* |
| | Engagement | 46% (0–100) | 59% (13–93) | 56% (19–82) | 50% (8–96) | 11% (0–57) | 57% (3–95) | 46% (0–100) |

not significant ($\rho = .137$, $n = 123$, $p = .64$). Active support drops out of the regression analysis, in favour of adaptive behaviour ($\beta = .77$, $t(124) = 13.405$, $p < .001$), which explains a significant proportion of variance (almost 60%) in engagement, $R^2 = .59$, $F(1, 124) = 179.70$, $p < .001$. If we look just at the four organisations that have been in the study the longest ($\beta = .63$, $t(77) = 7.03$, $p < .001$), the proportion of the variance in engagement explained by adaptive behaviour is slightly lower in Year 4 at 40%, $R^2 = .39$, $F(1, 77) = 49.38$, $p < .001$.

Exploratory univariate regression analysis (using Year 4 data) found that ability level significantly predicted active support scores, $\beta = .60$, $t(124) = 8.32$, $p < .001$. Level of ability accounted for 35% of the variance in the active support score, $R^2 = .39$, $F(1, 124) = 69.15$, $p < .001$. This figure is slightly lower if we just include Organisations 1–4, $\beta = .55$, $t(73) = 5.65$, $p < .001$, with ability level accounting for 30% of the variance in the active support score, $R^2 = .30$, $F(1, 73) = 31.88$, $p < .001$. However, it is still higher than it was in Year 1, for the same four organisations, $\beta = .35$, $t(64) = 3.01$, $p < .004$, as ability level accounted for a non-significant proportion of variance (only 12%) in the active support score, $R^2 = .12$, $F(1, 64) = 9.06$, $p < .004$. This provides further evidence that the quality of support has improved over time for those who are more able but not necessarily for those who need more skilled support to be engaged.

**Table 7.** Percentage of time spent engaged compared to benchmarked figures for appropriate ABS grouping presented in Mansell and Beadle-Brown (2012, Chapter 3 Table 3.9).

| | Year 4 | Mean ABS in Year 4 | Benchmarked mean percentage (and maximum) when active support is good |
|---|---|---|---|
| Org 1 | 46% (0%–100%) | 145 (34–260) | 61% (95%) |
| Org 2 | 59% (13%–93%) | 160 (50–253) | 69% (97%) |
| Org 3 | 56% (19%–82%) | 172 (76–263) | 69% (97%) |
| Org 4 | 50% (8%–96%) | 147 (36–249) | 69% (97%) |
| Org 5 | 11% (0%–57%) | 45 (22–79) | 43% (60%) |
| Org 6 | 57% (3%–95%) | 174 (57–251) | 69% (97%) |
| ALL | 46% (0%–100%) | 141 (22–263) | 61% (95%) |

## Practice leadership

Overall, practice leadership levels remained low over the four years, and as shown in Table 10, changed little over time. By Year 4, average scores across all organisations remained in the mixed range (a score of 3 and below). However, a very small number of people (nine across Organisations 1, 2, and 4) were living in settings where the practice leadership was rated good to excellent (a score of 4 or 5).

Across all organisations in Year 4, there were significant differences between scores on different domains of practice leadership ($X^2(4) = 137.24$, $p < .001$). The strongest domain was team meetings and the weakest coaching and supervision. Average scores, however, mask some variability between organisations. For example, across most years Organisation 2 showed the strongest practice leadership, being significantly better overall in Year 4

**Table 8.** Quality of support over time for whole sample.

| | | Yr 1 | Yr 2 | Yr 3 | Yr 4 |
|---|---|---|---|---|---|
| Active support score (mean and range) | Org 1 | 38 (16–71) | 38 (18–67) | 45 (13–92) | 68 (33–92) |
| | Org 2 | 89 (72–98) | 73 (46–90) | 67 (26–85) | 53 (8–89) |
| | Org 3 | 52 (8–93) | 38 (18–59) | 51 (13–87) | 55 (38–75) |
| | Org 4 | 33 (12–74) | 37 (5–69) | – | 62 (23–85) |
| | Org 5 | – | – | 28 (13–53) | 42 (20–77) |
| | Org 6 | – | – | 54 (7–82) | 64 (17–87) |
| | ALL | 47 (8–98) | 45 (5–90) | 48 (7–92) | 58 (8–92) |

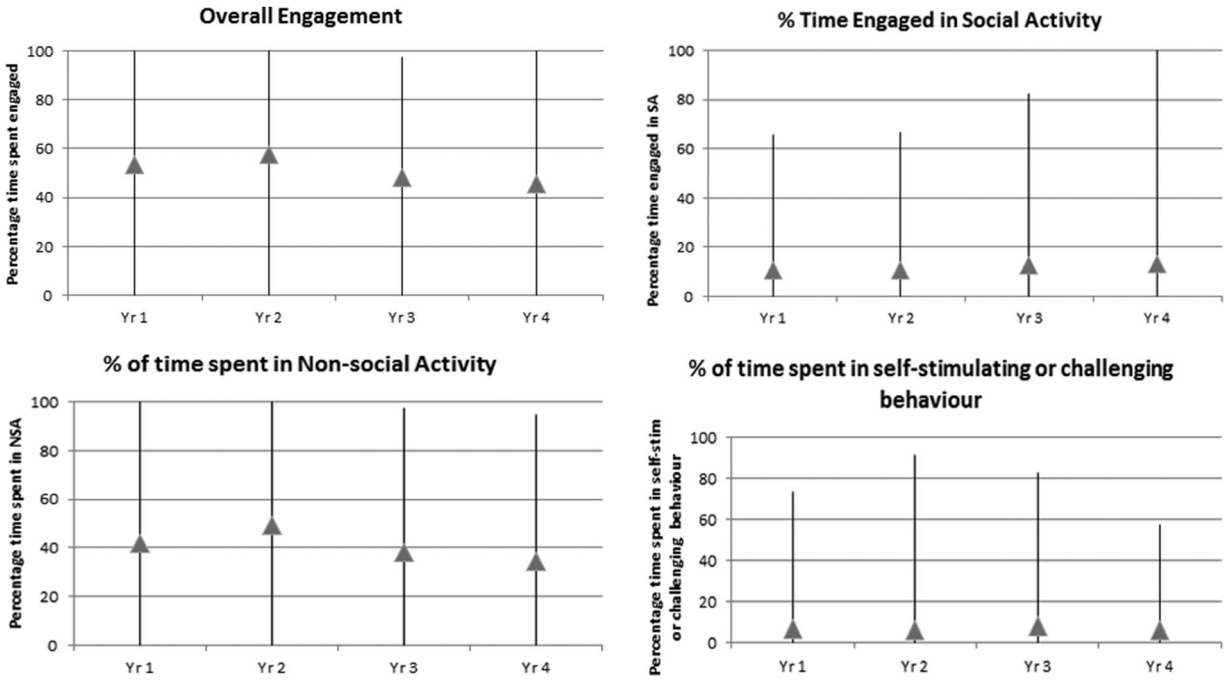


**Figure 1.** For overall sample, percentage of time (mean and range) spent in engagement overall, in social and non-social activity and in self-stimulatory or other repetitive or inappropriate behaviour (does not include aggression, destruction or self-injurious behaviour which were rarely observed).



than four of the five organisations – Organisation 3 ($U$ = 4.726, $p$ = < .001, $r$ = .78), Organisation 4 ($U$ = 3.634, $p$ < .001, $r$ = .50), Organisation 5 ($U$ = 4.277, $p$ = < .001, $r$ = .66), and Organisation 6 ($U$ = 5.141, $p$ < .001, $r$ = .72). These are all large effect sizes (Cohen, 1988).

Organisation 2 showed a slight but non-significant decline from Years 1 to 4 – which was most noticeable for supervision ($X^2(3) = 9.390$, $p = .025$) and overall manager focus on QoL ($X^2(3) = 20.642$, $p < .01$) – see Table 10. Conversely, Organisation 1 showed a significant increase from Years 1 to 4 ($X^2(3) = 22.56$, $p = .001$), with team meetings ($X^2(3) = 12.38$, $p = .006$) and coaching ($X^2(3) = 13.64$, $p = .003$) both showing a non-significant increase over time.

### *Training in active support*

The response rate for staff questionnaires ranged from 23% to 71%. Table 11 presents the percentage of staff who reported they had never had training in active support, the percentage who said their training was provided by someone external to the organisation and the nature of that training. Overall, there was a slight reduction in the percentage of staff reporting they had never had training in active support and this was repeated for most organisations. The most dramatic change was Organisation 1 which went from 63% to 8% of staff not having had any training in active support, and a slightly higher proportion by Year 4 who had received both classroom and hands-on training. Contrastingly, more staff in Organisation 2 reported no training in active support in Year 4 than had been the case in Year 1, and Organisation 4 showed a decrease in staff reporting no training in active support. However, 90% of these staff had only received classroom training in Year 4, and none reported both classroom and hands-on training.

**Table 9.** Percentage of people in each organisation receiving good active support at each time point and across the whole sample.

| | Yr 1 | Yr 2 | Yr 3 | Yr 4 |
|---|---|---|---|---|
| Org 1 | 11% | 6% | 17% | 65% |
| Org 2 | 100% | 60% | 65% | 47% |
| Org 3 | 38% | 0% | 40% | 25% |
| Org 4 | 10% | 3% | – | 55% |
| Org 5 | – | – | 0% | 17% |
| Org 6 | – | – | 38% | 75% |
| ALL | 30% | 14% | 30% | 50% |

At the overall service user level, there was only a weak positive correlation between ASM scores and the percentage of staff in that service reporting active support training in Year 2 ($\rho$ = .443, $n$ = 65, $p$ = .001), and no significant relationships between ASM score and the percentage of staff reporting both classroom and hands-on training or the percentage of staff reporting only classroom training. Finally, at a staff level, there were no significant associations between services coded as providing weak, mixed or good active support and percentage of staff reporting both classroom and hands-on training. However, for most years the number of services in the good ASM

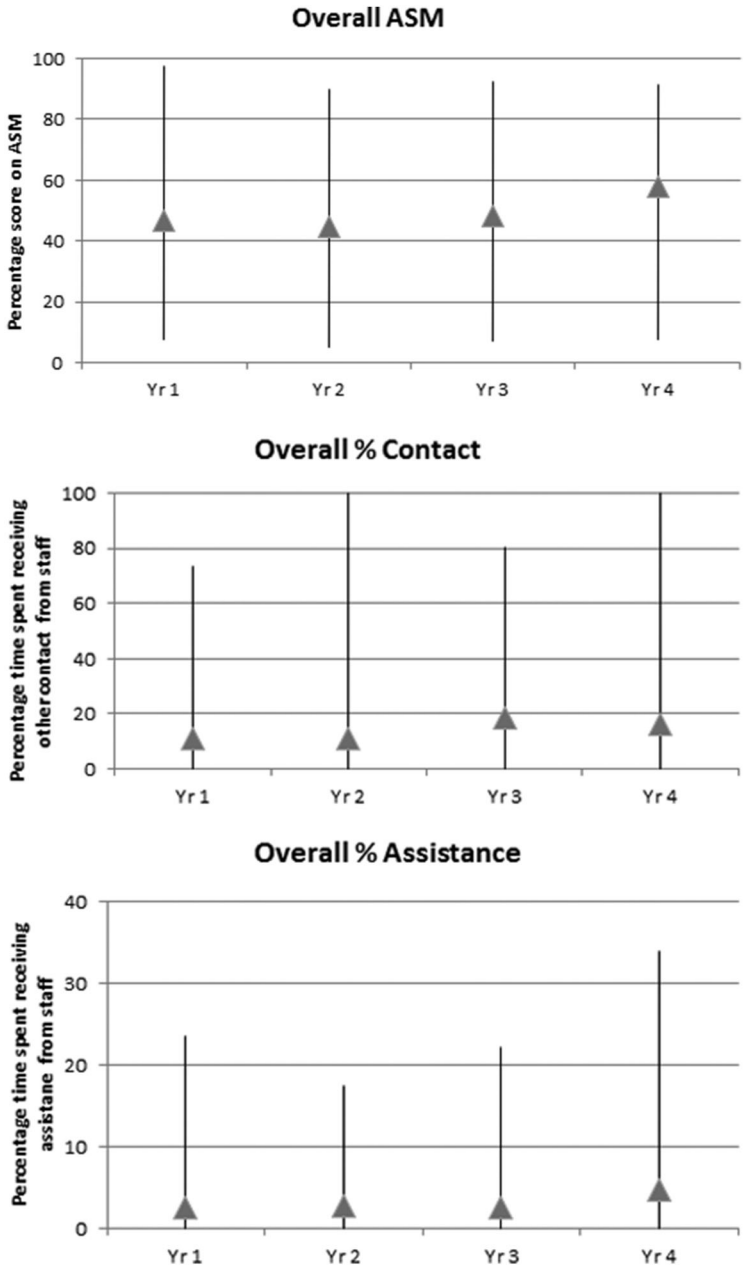


**Figure 2.** Average (and range) scores on the ASM and the percentage of time (mean and range) receiving any contact, and assistance.

group was low and very few staff had reported both classroom and hands-on training. Even in Year 4 where 36 out of 56 staff were working in services rated as having a good ASM level, only 10 staff had reported both classroom and hands-on training, although interestingly 7 of those were in services with good ASM scores.

## Discussion

### *Implementing and maintaining active support is hard*

This is the first longitudinal study of active support in Australia and the key finding from this study was essentially that active support is hard to maintain over time. This supports earlier work by Mansell and Beadle-Brown (2012) and others in the UK. Most organisations showed at least some improvements in active support over time but none, including those that had been implementing active support for over 10 years, were achieving the engagement levels commensurate with those found to be possible in other research for people of similar levels of ability (Mansell & Beadle-Brown, 2012). The fragile nature of good support and vagaries of sustaining it over time were illustrated by Organisation 2, which had the highest levels of active support at Year 1 but by Year 4 both quality of support and engagement levels had fallen. In contrast, however,

**Table 10.** Observed practice leadership scores – mean and range overall for all organisations and mean score on each domain for organisations 1, 2, and 3.

| | | Yr 1 | Yr 2 | Yr 3 | Yr 4 |
|---|---|---|---|---|---|
| *Overall practice leadership (observed) score* Mean rating (range) median | Org 1 | 1.90 (1–3) | 2.70 (2–3) | 2.40 (1–3) | 2.80 (1–4) |
| | Org 2 | 3.70 (3–4) | 2.93 (3–3) | 3.48 (2–5) | 3.37 (2–5) |
| | Org 3 | 2.47 (2–3) | 2.60 (1–4) | 1.30 (1–2) | 1.75 (1–3) |
| | Org 4 | 2.58 (2–4) | 3.00 (2–4) | – | 2.54 (1–5) |
| | Org 5 | – | – | 2.40 (2–3) | 2.45 (2–3) |
| | Org 6 | – | – | 2.29 (1–4) | 2.10 (1–3) |
| | ALL | 2.53 (1–4) | 2.85 (1–4) | 2.41 (1–5) | 2.52 (1–5) |
| *Managers overall focus on QoL* Mean rating (range) median | Org 1 | 2.25 | 3.00 | 2.00 | 3.00 |
| | Org 2 | 4.50 | 3.00 | 3.40 | 3.67 |
| | Org 3 | 2.33 | 2.33 | 1.25 | 2.00 |
| *Allocating staff* Mean rating (range) median | Org 1 | 1.50 | 2.25 | 2.50 | 3.00 |
| | Org 2 | 3.00 | 3.33 | 4.20 | 3.67 |
| | Org 3 | 2.67 | 3.00 | 1.25 | 1.75 |
| *Coaching staff* Mean rating (range) median | Org 1 | 1.50 | 2.75 | 2.50 | 2.60 |
| | Org 2 | 3.50 | 2.33 | 3.20 | 3.00 |
| | Org 3 | 2.33 | 2.67 | 1.00 | 1.25 |
| *Supervision* Mean rating (range) median | Org 1 | 2.00 | 2.75 | 2.25 | 1.60 |
| | Org 2 | 3.00 | 2.33 | 2.80 | 2.50 |
| | Org 3 | 2.00 | 2.33 | 1.25 | 1.25 |
| *Team meetings* Mean rating (range) median | Org 1 | 2.25 | 2.75 | 2.75 | 3.80 |
| | Org 2 | 4.50 | 3.67 | 3.80 | 4.00 |
| | Org 3 | 3.00 | 2.67 | 1.75 | 2.50 |

Organisation 1 showed steady but non-significant increases from Years 2 to 4 which importantly, related to people with both severe and less severe disabilities.

Despite these overall trends, levels of engagement and active support varied substantially within organisations and within services. Even in services where active support was generally higher, scores were still "mixed" indicating that sometimes individuals received good support and sometimes they did not. For the most part the variability was explained by ability levels of service users. People who were more able were in general most engaged and received more appropriate and consistent support. For many of these people the appropriate change needed was for staff to stand back and let them do things themselves with minimal assistance, rather than staff doing things for them. This finding provides further support for the suggestion from an earlier paper from this study (Mansell et al., 2013) and from another study of those living independently with drop-in support (Bigby, Bould, & Beadle-Brown, 2017), that a significant sub-group of people in supported accommodation services do not require the level of support provided in those services and have considerable potential to live more independently.

For people with higher support needs, providing more intensive and skilled hand over hand assistance where needed, appeared to be hardest for staff. A core area on which organisations need to focus is ensuring staff provide just the right amount, and type of assistance to each individual. The quality of the assistance is as important, if not more so, than the amount of assistance received. For instance, people with both severe and less severe intellectual disability need assistance from staff to be constructively occupied in more complex activities, but despite observations occurring in the lead up to the evening meal some people were not involved in meal preparation and spent significant time in solitary activities that do not require staff support (i.e., audio-visual).

### What might be needed for success

So, what might explain this variability and what is needed for successful implementation and maintenance of active support over time? This study explored just two potential factors that have been highlighted in previous research – practice leadership and staff training. Although analysis was limited by the small number of services in each organisation, the findings indicate that these variables will be important to include in the analysis of the data set that will include a larger number of services from more organisations when the study is completed. With regards to practice leadership, there appears to be a relationship between increasing practice leadership and quality of support, as shown by Organisation 1. The inverse was apparent for Organisation 2 where the slight decrease in practice leadership may at least partly explain the decrease in active support.

In terms of training in active support, there also appeared to be a tentative relationship between the proportion of staff reporting training in active support and the quality of support. For example, the capacity to increase the quality of support over time demonstrated by Organisation 1 may be linked to the increased levels of staff reporting training over time. In contrast, the increase in staff reporting no training in active support in Organisation 2 could be linked to the decline in active support. Although not many staff reported hands-on training (which had been found to be important in other studies such as Jones, Felce, Lowe, Bowley, Pagler, Gallagher, et al., 2001; Jones, Felce, Lowe, Bowley, Pagler, Strong, et al., 2001), those that did were more likely to be working in services where active support was good. A possible confounding factor is that not all organisations directly labelled training as active support although active support principles were included in training as part of an overall practice framework. As such staff did not always know that they had had training in "active support". This raises a number of issues worth exploring further about the importance of explicitly naming active support in training or practice frameworks. It is possible

**Table 11.** Reported staff training in active support.

| | % staff reporting ***never*** had training in active support | | | | % staff reporting training in active support was delivered by a trainer external to the organisation | | | | % staff reporting BOTH classroom based and hands-on training in active support | | | | % staff reporting only classroom-based training in active support | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yr 1 | Yr 2 | Yr 3 | Yr 4 | Yr 1 | Yr 2 | Yr 3 | Yr 4 | Yr 1 | Yr 2 | Yr 3 | Yr 4 | Yr 1 | Yr 2 | Yr 3 | Yr 4 |
| Org 1 | 63% $n=24$ | 53% $n=19$ | 53% $n=17$ | 8% $n=12$ | 43% $n=7$ | 80% $n=5$ | 50% $n=6$ | 33% $n=9$ | 0% $n=6$ | 0% $n=4$ | 0% $n=6$ | 33% $n=6$ | 83% $n=6$ | 75% $n=4$ | 67% $n=6$ | 67% $n=6$ |
| Org 2 | 7% $n=15$ | 0% $n=10$ | 14% $n=21$ | 29% $n=21$ | 10% $n=10$ | 13% $n=8$ | 7% $n=15$ | 9% $n=11$ | 29% $n=7$ | 0% $n=7$ | 8% $n=13$ | 27% $n=11$ | 43% $n=7$ | 57% $n=7$ | 85% $n=13$ | 73% $n=11$ |
| Org 3[a] | 14% $n=7$ | 40% $n=5$ | 0% $n=4$ | 17% $n=6$ | – | – | – | – | – | – | – | – | – | – | – | – |
| Org 4 | 25% $n=28$ | 24% $n=34$ | – | 7% $n=14$ | 53% $n=17$ | 41% $n=22$ | – | 15% $n=13$ | 13% $n=16$ | 5% $n=20$ | – | 0% $n=10$ | 81% $n=16$ | 80% $n=20$ | – | 90% $n=10$ |
| Org 5 | – | – | 33% $n=21$ | 31% $n=26$ | – | – | 42% $n=12$ | 7% $n=14$ | – | – | 10% $n=10$ | 25% $n=16$ | – | – | 60% $n=10$ | 50% $n=16$ |
| Org 6 | – | – | 6% $n=16$ | 14% $n=14$ | – | – | 17% $n=12$ | 0% $n=7$ | – | – | 8% $n=12$ | 0% $n=9$ | – | – | 83% $n=12$ | 89% $n=9$ |
| ALL | 32% $n=74$ | 29% $n=68$ | 25% $n=79$ | 20% $n=93$ | 46% $n=39$ | 38% $n=37$ | 29% $n=49$ | 16% $n=58$ | 12% $n=33$ | 3% $n=31$ | 7% $n=44$ | 18% $n=55$ | 70% $n=33$ | 74% $n=31$ | 70% $n=44$ | 67% $n=55$ |

[a]NB return rate for Org3 was very low across (max. 7 in any one year), with 3–4 completing the follow-on questions about training. As such the percentages have been omitted from the table percentages based on such low numbers would be misleading.



that naming active support in this way is necessary for staff to understand why active support is important and to help them be motivated to do it, as well as ensuring their verbal and practice competency in this way of working. For these reasons, it may be worth including questions to staff about the components of the training rather than just asking "did you have training in active support?" The findings about staff training also illustrate the ongoing managerial attention required to implement active support and how basic elements such as staff training can fall away over time, even in organisations, such as those in our study, which have invested significant resources in active support research and practice development.

Three additional rounds of data collection remain for the larger study from which these data were drawn, providing opportunities for further information to be collected on organisational structures and support for practice leadership as well as the nature of training staff receive. This will allow further exploration of the roles practice leadership and training have in ensuring staff can provide active support. Further analysis will also include factors relating to organisational culture using the Group Home Culture Scale developed as part of this study (Humphreys, Bigby, Iacono, & Bould, 2016), and processes such as methods of monitoring practice quality, and recruitment practices including position descriptions, selection criteria, induction, as well as awareness of active support at different organisational levels.

One difficulty of identifying factors supporting implementation and maintenance of active support is that only small numbers of people consistently receive good active support. An inherent risk of the larger study from which these data were drawn, is that numbers receiving good active support do not increase substantially over time or good active support is limited to one organisation or to people with lower support needs. However, hopefully the trend of improvements in active support for Organisations 5 and 6 in this subset of the data will continue over the next three years. The final data set will include over 500 people and if only one-fifth of people are receiving good support this would be sufficient to allow inferential analysis. In addition, a larger data set including more services providing good active support will make it possible to explore any changes in the nature and complexity of activities in which people are engaged as active support is implemented and maintained. For example, although very able people might be engaged quite a lot of the time, some evidence suggests much of this engagement is simple, passive and relatively solitary. With good implementation of active support over time, it might be surmised that people would have more opportunities to take part in activities that involve gas or electrical equipment, in jobs and in volunteering and social activities in the community.

One of the limitations of this study is cluster effects. Data for the most part have been analysed at the individual participant level which means that some of the staff and service level variables are repeated within the data set for people in the same service, thus creating a possible clustering effect. Analysis of the final data set will allow any findings at service user or staff level to be checked at service level as many more services will be available within the data set. We will also be able to look more closely at clustering by organisation or by type and nature of accommodation setting, which will shed light on how different approaches and models used in different organisations might be affecting outcomes for those they support.

## Conclusion

The findings from this study confirm the difficulties highlighted in previous work on implementing and maintaining active support, despite the evidence of the benefits to service users' QoL of this approach. The role of hands-on training and practice leadership continue to emerge as important but also not, it appears, easy to put into place. The importance of these factors to provision of quality support will need to be carefully factored into future funding schemes for service users of shared supported accommodation. Particularly for service users with higher support needs who rely on a team of staff available round the clock. These factors do not lend themselves easily to individualised solutions but rather need to be embedded within organisational processes and structures. Further research needs to explore the models that work best in different settings to make these important facilitative factors a reality. Finally, the findings illustrate the need for continuing attention to the quality of staff practice given its precarious nature even in organisations that can demonstrate good practice at any one point in time. They suggest that any system that aims at measuring service user outcomes and the quality of support they receive needs to include repeated and robust observations of these factors. In Australia under the reformed market for disability services envisaged by the National Disability Insurance Scheme it should not be sufficient for organisations to make claims about the quality of their support but rather will need to demonstrate continued fidelity through such observational data on staff practice and service user outcomes.

## Note

1. For the purposes of this study supported accommodation services are defined as services which support 1–6 people in ordinary houses dispersed in the community with 24-hour support available or on call. For the most part the housing is provided by the organisation who also provides support.

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## ORCID

*Christine Bigby* http://orcid.org/0000-0001-7001-8976
*Emma Bould* http://orcid.org/0000-0003-3108-2072
*Julie Beadle-Brown* http://orcid.org/0000-0003-2306-8801

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