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**Title: Investigating the impact of staff training in positive behavioural support on service user quality of life**

**Abstract**

This research aimed to discover whether staff training in PBS (Positive Behavioural Support) improves service user quality of life. The study used t-tests to compare service user quality of life, as measured by the World Health Organisation's WHOQOL BREF, in supported living homes where staff had received PBS training versus supported living homes where staff had not received PBS training. Results show that, although quality of life was good across the board, environmental quality of life was significantly better in those supported living homes where staff had been trained in PBS. The conclusion is that PBS training positively influences environmental quality of life for service users, and that it should continue to be the focus of organisational investment.

**Background**

*'The first step toward success is taken when you refuse to be a captive of the environment in which you first find yourself' - Mark Caine*

Positive Behavioural Support (PBS) is the application of applied behavioural analysis to assist people with challenging behaviours (LaVigna & Willis 2012). The goal is to improve quality of life by providing a framework for organising and structuring multi-element support (Toogood, 2017). It includes adapting environments so that challenging behaviour is less necessary, teaching socially effective alternative behaviours, and motivating people to overcome inappropriate, stigmatizing or destructive ways of responding (LaVigna and Willis, 2005; McClean and Grey, 2017). The concept underlying PBS is simple; if people know how to exercise control over their environment they will produce less challenging behaviour (Hassiotis et al., 2014).

PBS is important in the field of intellectual and learning disability (Hassiotis et al., 2014). It has been estimated that the prevalence of challenging behaviours in people with learning disabilities has ranged from 10% (Emerson and Einfeld, 2011) to 15% (Holden and

Gitlesen, 2006), increasing the likelihood of challenging behaviour with higher levels of intellectual disability (Janssen et al., 2002). Furthermore, prevalence is higher amongst teens and young adults and has a grave impact on the development of services (NICE Guidance, 2015).

Accordingly, much research evaluating the effectiveness of PBS focuses on reduction of incidences of challenging behaviour (e.g., McClean et al., 2005), which neglects quality of life as an important outcome (LaVigna & Wills, 2012, Wardale, Davis, Carroll, & Vassos, 2014). The relative under-reporting of quality of life may reflect the fact that the outcome is difficult to assess numerically (Jones, 2014). Whatever the reason, relative to reduction of instances of challenging behaviours, quality of life is less well researched.

Researchers have long recognised that challenging behaviour undermines the personal development and quality of life of people with intellectual and learning disabilities (McClean Grey and McCracken, 2007). PBS advocates that people with disabilities are entitled to live in the same settings as everyone else and that they should have equal access to life opportunities (i.e., work, social, and educational opportunities; Sylvester, 2014). Thus, PBS strives to enhance person-centred values, such as choice and self-determination, meaningful participation in community life, gaining and maintaining satisfying relationships, making choices in everyday life, undertaking respected roles, living with dignity, and the development of personal competencies (Gore et al., 2013).

PBS is important because expert opinion, rather than user perceptions, have traditionally driven behavioural interventions and defined outcomes (LaVigna and Willis, 2012). Examples of expert-driven models include special treatment units and specialist teams. An alternative model of delivery of positive support is Person Focused Training (McClean et al., 2005; Grey & McClean, 2007). This involves staff undertaking functional assessments and designing/implementing behaviour support plans for individual service users (McClean et al.,

2005). Person Focused Training offers the distinct advantage of circumventing some of the problems (e.g., resource scarcity and waiting lists) typically associated with specialist professionals, professional teams, and treatment units (McClellan et al., 2005). In addition, because of its person-centred orientation, PBS regards stakeholders (i.e. the person with disabilities, their family, and service provider staff) as active participants in assessment, the determination of intervention strategies, evaluation, and thinking about what outcomes might improve individuals' quality of life rather than considering them as passive recipients of expert instruction.

Against this backdrop, Future Directions Community Interest Company, a social care provider for people with learning disabilities and complex needs in the North West of England, embarked on a collaboration with Manchester Metropolitan University designed to assess the impact of training staff in PBS. Future Directions invested significant resources in PBS training and wanted to evaluate whether this training was making a difference to clients' quality of life. By 2016, approximately half of the staff group received training. This provided an ideal opportunity to determine the effect of staff training (i.e., residing with PBS trained staff vs. residing with untrained staff) on service user quality of life. The present paper examines the impact of PSB staff training within Future Directions on client quality of life. This extends previous research on the outcomes of PBS which often overlooked the impact of training on the quality of life of those in receipt of services.

### **Aim**

This study investigated whether staff PBS training improved service user quality of life. The research question was 'Is there a difference between service users quality of life in houses where staff have received PBS training v houses where staff have not received PBS training?'

## **Ethical Considerations**

Prior to the commencement of data collection, ethics approval was obtained from the Manchester Metropolitan University, Faculty of Health, Psychology and Social Care Ethics Committee. Potential participants were approached in person by Future Directions CIC staff from whom they did not receive services. It was stressed to potential participants that they were free to decline and that doing so would not impact on the services they receive.

Inclusion criteria: People currently accessing services from Future Directions aged 18 or over, with sufficient language capacity to complete the relevant questionnaires. Exclusion criteria: People with a level of aphasia or comprehension difficulties that would prevent successful participation.

Data was collected by Future Directions staff with current DBS checks. All those collecting data were familiar with the policies and procedures of the organisation. Data collectors were also familiar with the support needs of the participants and were able to adjust the environment to be supportive of participants where necessary.

## **Participants**

Forty-nine clients from a community interest company specialising in the provision of supported living services in the North-West of England participated in this research. Eighteen were women (Mean ( $M$ ) = 56.06,  $SD$  = 15.40, Median = 56.00, Range 31-85) and 31 were men ( $M$  = 51.57,  $SD$  = 13.05, Median = 51.00, Range 19-75). Participants average age was 53.19 (Median = 52, Range 19-85,  $SD$  = 13.95 years). All participants had learning disabilities. Eight participants had mental health issues. Forty-five were not working and four were in work. Forty-eight clients were unmarried and one was married. All participants were living in supported accommodation. Of these, 22 participants (45%) were in houses where staff had received PBS training and 27 (55%) were in houses where the staff had not yet received PBS training.

### **Details of PBS Training**

All trained staff received a 3-day workshop on Autism, Positive Behavioural Support, Active Support and Communication, this occurred 18 months prior to data collection. Managers and Nurses received additional training; this included functional assessments, analysis, devising support plans and ensuring proactive strategies. Training structure embedded values, theory, and process. Workplace champion Active Support coaches with a staff support role were also established. Individual's specific need determined delivery of PBM training.

### **Outcome Measures**

The World Health Organisation Quality of Life (WHOQOL) group (1998) define quality of life as, 'an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns'. The WHOQOL-BREF is a valid and reliable quality of life measure, which provides robust psychometric performance across a broad range of applications (Skevington & McCrate, 2012). The WHOQOL-BREF includes four domains that elicit 'individual' perceptions of position in life in the context of the culture and values systems in which they live and in relation to their goals, expectations, standards and concerns (The WHOQOLGroup, 1998). *Physical Health* includes 7 items pertaining to medication, activities of daily living, energy and fatigue, mobility, pain, sleep and capacity for work (e.g., 'How much do you need medical treatment to function in your everyday life?'). *Psychological* consists of 6 items relating to bodily image, negative and positive feelings, self-esteem, personal beliefs, thinking, learning, memory and concentration (e.g., 'Are you able to accept your bodily appearance?'). *Social Relationships* includes 3 items relating to personal relationships, support from friends, and sexual activity (e.g., 'How satisfied are you with your personal relationships?'). *Environment* consists of 8

items relating to financial resources, physical safety and security, health care, participation, physical environment and transport (e.g., 'Have you enough money to meet your needs?'). Participants indicated the degree to which they endorsed each item on a 5-point Likert Scale.

### **Analysis**

WHOQOL-BREF scoring instructions require removal of assessments where more than 20% of data is absent. Where an individual item is missing the mean of other domain items acts as a replacement value. When a domain contains more than two missing items calculation of the domain score was not possible (with the exception of domain 3, only if < 1 item is missing). Data screening confirmed that skewness and kurtosis were acceptable. Finally, performance of independent t-tests ascertained whether there were statistically significant differences between the quality of life of participants in units where staff had trained in PBS v units where staff had not yet received PBS training. WHOQOL domains were individually tested.

## Results

Bonferroni adjustments determined that the level of probability required for statistical significance was  $p \leq .0125$ . The WHOQOL-BREF allows domain raw score conversion to a 0-100 scale<sup>1</sup>. A series of independent t-tests examined differences between PBS trained and untrained staff. Descriptive information appears in table 1.

Table 1 WHOQOL Mean Scores (0-100)

Domain	WHOQOL Mean Scores (0-100)						<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
	Trained			Not Trained						
	<i>M</i>	<i>SD</i>	<i>SE</i>	<i>M</i>	<i>SD</i>	<i>SE</i>				
Domain 1: Physical Health	57.67	15.02	3.54	55.42	8.46	1.73	0.57	25.01	= .57	0.20
Domain 2: Psychological	60.05	16.23	3.63	61.08	10.28	2.06	-0.25	30.66	= .81	0.08
Domain 3: Social Relationship	64.33	19.55	4.61	57.64	19.04	4.06	1.09	38.00	= .28	0.36
Domain 4: Environment	86.95	8.64	1.98	77.40	10.50	2.10	3.22	42.00	= .002	1.00

There was a statistically significant difference between clients living in houses where staff had received PBS training and houses where the staff had not yet received PBS training regarding Domain 4 (Environment,  $p = .002$ ; Mean Difference = 9.56; 95%CI [3.56, 15.53]). There was no statistically significant difference between those living in houses where staff had received PBS training and houses where the staff had not yet received PBS training with regard to Domains 1, 2, or 3 (Physical Health, Psychological, & Social Relationships).

<sup>1</sup> Exactly the same pattern of results and significance were evident when raw scores were used



## **Discussion**

With reference to challenging behaviour, the ability to appropriately devise and assess the effectiveness of interventions is essential to service providers (Feeley & Jones, 2006). This is especially true, in environments where funding opportunities are restricted. PBS assumes that improved quality of life arises from satisfaction of individual client needs. Adapting environments so that occurrence of challenging behaviour is less likely is fundamental to this approach (Koegel, 1996). Accordingly, living environments are vitally important. Indeed, 'One of the central messages of PBS is that, in providing support, we should focus our efforts on fixing problem contexts and not problem behaviour' (Carr et al., 2002, p.9). Consistent with this view, the WHOQOL BREF environmental quality of life measure assesses perceptions of financial resources, physical safety and security, health care, participation, physical environment and transport.

The present study revealed that Future Directions clients, regardless of staff PBS training, scored highly on environmental quality of life. One explanation for this is that all clients resided with staff who had received person-centred approaches training. Hence, staff were generally aware of the importance of client support. Analysis also revealed that environmental quality of life was significantly better when clients were living in houses where staff had received PBS training. This finding suggested that PBS training equips staff with a skill set that facilitates adaptive interactions.

When people know how to exercise control over their environment they typically engage in less inappropriate or challenging behaviour (Hassiotis et al., 2014). This intuitively suggests that facilitating control should produce improvements across WHOQOL BREF domains. This did not occur in the present study, it may be that the relatively short time since PBS training (i.e., approximately 18 months) was insufficient for benefits in Physical Health, Psychological, & Social Relationships domains to manifest. From a PBS perspective,

environment is the foundation stone of quality of life. Carr et al. (2002, p.7) suggest that ‘the primary intervention strategy involves rearranging the environment to enhance lifestyle and improve quality of life rather than operating directly on reducing problem behaviour per se’. This suggests that changes in the other domains may occur over extended periods. Hence, further assessments at later points in time are necessary.

Overall, results indicated that training staff in PBS positively influenced environmental quality of life for service users. There was also a trend towards higher quality of life in social relationships (Cohens  $d = 0.36$ , small effect size). This may be a function of sample size, and/or relatively short time since training. Additionally, scores in the social relationships domain were lower than anticipated. According to MENCAP, ‘People with a learning disability have fewer friends than the general population’. Future directions recognise that their approach to PBS needs to further develop support in this area. Of particular relevance in this regard is the emerging ‘social cure’ literature, which advocates active membership of social groups as key to building, and maintaining, social relationships, health and well-being (Jetten, Haslam, and Haslam, 2012). Individuals living environments are the first plank in building these.

### **Implications for Practice**

‘Training is only likely to be effective when it is supported by management leadership’ (Mansell 1996, p57). Future Directions have embraced PBS by embedding the concept within key elements of provision; Future Directions have a PBS lead, a PBS newsletter and have made a PBS training DVD, which is part of a training package offered to all staff. Additionally, trained managers undertake functional analysis, develop plans and deliver support and coaching to staff teams. Future Directions also have trained active support champions, whose role is to apply learning to practice.

At a strategic level, A PBS action plan is in place. This is a 12-month strategy aligned with the PBS academy competency framework. Furthermore, Future Directions have signed up to the NHS England Stomp pledge (Stop over medicating people with a learning disability, autism or both), which together with PBS, is helping to reduce the amount of antipsychotic medication used. Concomitantly, planning and initiatives has reduced reactive strategies, including physical intervention, across the organisation.

Looking forward, Future Directions plan to continue to train managers in practice leadership to implement and further embed PBS throughout the organisation. Subsequently, PBS leads will receive training in Improving Access to Psychological Therapies (IAPT). Currently, people with learning disabilities have only limited access to psychological therapies, which help to regulate emotions. This will compliment proactive strategies by improving self-regulation and emotion. Periodic service reviews and consultations with important stakeholders will be undertaken. For example, communications with housing providers will ensure that accommodation is appropriate.

### **Limitations**

The two main limitations of this study are sample size (N = 49) and the relatively short amount of time between staff training in PBS and data collection (c. 18 months). It may be that these factors are masking significant relationships that a larger sample size, and a greater time lapse could illuminate.

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