Leading the Agenda

Rehabilitation for people with sight loss.

Nov 2018

Overview

In this paper we look at the outcomes from our rehabilitation service and discuss successful interventions and how these may inform future approaches. The rehabilitation service works with people who have been registered as sight impaired or severely sight impaired.

Introduction

Vista's rehabilitation service works with people who have been registered as sight impaired or severely sight impaired. This is a statuary service funded by the local authority. At Vista we are in the fortunate position to have trained rehabilitation officers working across Leicester, Leicestershire and Rutland.

Access to rehabilitation services can be variable. Thetford et al. (2009) notes that this variability not only relates to geographical variation but also to variation in the content of the service on offer, together with the organisation delivering the service. In the same research, most questionnaire respondents stated that their rehabilitation was limited to a visit by a rehabilitation officer or specialist social worker who provided a small number of very basic aids (such as a liquid level indicator, a talking watch and some bump-stickers for kitchen appliances). Only 8 out of 37 people had undertaken a full programme of rehabilitation and mobility training.

Earlier research has shown that rehabilitation has positive effects on the emotional and cognitive situation of people with sight loss. Furguson et al. (1994) observed reductions in anxiety and depression and increases in self-esteem, suggesting that rehabilitation training is highly effective in altering cognitions and associated emotions.

This is important as people in the UK with sight loss, compared to those with no impairment, are, according to (McManus and Lord, 2012):

- seven times more likely to have been feeling unhappy or depressed a lot more than usual (14% vs. 2%);
- nine times more likely to have been feeling worthless recently a lot more than usual (9% vs.1%);
- three times more likely to not feel optimistic about the future (9% vs.3%);
- nine times more likely never to feel useful (9% vs. 1%);

- five times more likely to never feel close to others (5% vs. 1%).

Because of the variation in rehabilitation effectiveness and the differing viewpoints the aim of this work was to analyse our rehabilitation service outcome data to assess the success of various approaches and to identify areas for potential improvement, which can be addressed in a different way.

Method

As part of our rehabilitation service all people using the service use a standard outcome framework to assess progress during the rehabilitation phase. This 7-theme framework also forms the reports that are provided to the local authority. We used this dataset to understand the effectiveness of the service across these different themes.

Outcomes measures

The seven outcome measures and their definitions are:

1. Quality of life – Assessment of quality of life by individual
2. Choice and control – Ability of the individual to make their own choices and decisions.
3. Health and wellbeing – Physical health of the individual
4. Economic wellbeing – The financial health of the individual
5. Making a positive contribution – Ability of the individual to contribute to their community (e.g. employment, volunteering etc).
6. Personal dignity – Ability of the person to perform personal hygiene activities
7. Mental health – The cognitive and emotional wellbeing of the individual

All outcomes are self-reported and completed with assistance from the rehabilitation officer. These are reported on an 8-point Likert scale where 1 represents the lowest score and 8 represent the highest (e.g. excellent health, quality of life and so on).

We have reported the outcomes at 4 different interventions by the rehabilitation office; baseline, follow up 1, follow up 2, and follow up 3.

Analysis

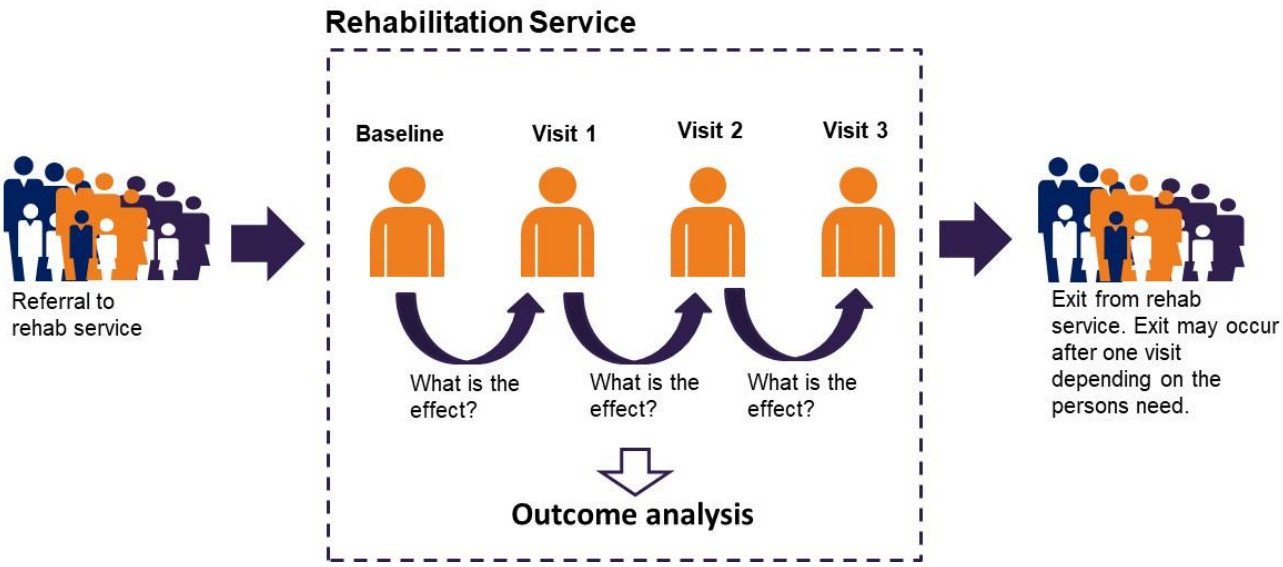
Descriptive statistics were used to look for trends in the data and non-parametric repeated measures ANOVA was used (Freidman Test of Significance) to examine the relationship between interventions and

outcome measures. A Wilcoxon rank test with Bonferroni correction was used to look at the differences between follow up points and the baseline data. Put simply we were looking to see at what point and for which outcome rehabilitation is most effective. These statistical tests allowed us to do this.

Statistical analysis was carried out using SPSS software. The economic benefit was calculated using Vista's bespoke Social Value Tool.

We used an anonymised set of outcome data from the period November 1st 2017 to October 31st 2018. A schematic of the analysis process is shown in figure 1.

Figure 1. Schematic of rehabilitation service and approach to analysing outcomes



Results

Profile of people receiving rehabilitation.

Over the year 1053 people used our rehabilitation service (n_{tot}=1053), of these almost three quarters were aged 65 or older (n_{65+}=772). There were more females using the service (n_f=609) compared to males (n_m=443). The majority (n_w=830) of people identified themselves as White-British, followed by Asian/Asian British-Indian (n_A=117). This reflects the ethnic makeup of Leicestershire and Rutland and the ethnic diversity of Leicester City.

Table 1 – Ethnicity of people receiving rehabilitation

Ethnicity	Female	Male	Trans Gender	Grand Total
Arab	1	2		3
Asian Or Asian British - Bangladeshi	2			2
Asian Or Asian British - Chinese	2	1		3
Asian Or Asian British - Indian	64	53		117
Asian Or Asian British - Other	7	19		26
Asian Or Asian British - Pakistani	3	5		8
Black Or Black British - African	3	3		6
Black Or Black British - Caribbean	9	5		14
Black Or Black British - Other Black Background	2	1		3
Not Stated / Not Yet Obtained	7	8		15
Other Ethnic Group	3	1		4
White - British	492	337	1	830
White - European	4	1		5
White - Irish	5	1		6
White - Other White Background	5	6		11
Grand Total (n=)	**609**	**443**	**1**	**1053**

Table 2 – Age breakdown from people receiving rehabilitation

Age range	Female	Male	Trans Gender	Grand Total
0-19	19	19		38
20-39	26	34	1	61
40-64	92	90		182
65-74	40	64		104
75-85	155	93		248
85+	277	143		420
Grand Total (n=)	**609**	**443**	**1**	**1053**

The outcome of our rehabilitation services

The main effect of the service can be seen below in table 3.

Table 3 – Scores for each outcome measure at baseline and subsequent follow up. Note; scores based on mean values.

Outcome measure	Baseline	Visit 1	Visit 2	Visit 3	Overall Sig.
Quality of Life*	4.74	5.58**	6.33**	6.45	0.01
Choice and Control*	3.57	5.08**	5.7**	6.25	0.01
Health and Wellbeing*	4.27	4.52**	4.89	4.75	0.03
Economic Wellbeing	5.82	5.93	5.71	7.00**	>0.05
Personal Contribution	5.10	5.24	5.05	5.00	>0.05
Personal Dignity	6.29	6.29	6.30	6.33	>0.05
Mental Health	5.37	5.40	5.50	6.00**	>0.05
Number of people using rehab (n=)	1053	971	65	11	

* Significant main effect of rehab on outcome

**Bonferroni correction applied, alpha level for sig. = .0125

The statistical analysis shows that rehabilitation has a significantly positive effect on the outcomes of Quality of Life, Choice and Control, and Health and Wellbeing ($p<0.05$). All other outcomes recorded a non-significant change from the baseline report prior to rehabilitation taking place. Nevertheless, the non-significant outcomes all displayed an increase from the baseline score by visit 3, with the exception of Personal Contribution.

The data from the follow up visits were also examined to establish which of these created a significant positive effect. Across the outcomes of Quality of Life, Choice and Control and Health and Wellbeing follow up 1 created a significantly more positive change. A further significantly positive change from follow up 1 was seen at follow up 2 for Quality of Life and Choice and Control. No further significant changes were reported. It is worth noting that most people receiving rehabilitation only required 1 follow up with the follow up 2 recording a large reduction in people requiring support a 2nd or 3rd time (see Table 3).

Although Economic Wellbeing did not have a significant main effect there was a significant change between follow up 2 and follow up 3. The sample size is smaller at this stage and this may be due to an anomaly given the main effect was non-significant for this outcome. The same was noted for the Mental Health outcome.

The economic benefit?

The greatest economic impact of the rehabilitation is attributable to the increased independence of users of the rehabilitation service. By giving people greater Choice and Control, the outcome with the greatest change in score between the baseline and Visit 1 (Table 3), an estimated net saving of £113,712 has been achieved because of the reduced need for social care.

The positive effect of rehabilitation on Health and Wellbeing, as evidenced by the data and analysis, is associated with a reduction in prescribing and use of NHS services, leading to net savings of almost £20,000.This shows the benefit of rehabilitation services and how this intervention provides savings for other health care provisions .

What does this tell us?

Interrogating the data in this way allows us to see where our services are having the greatest impact, where they could be improved or where a new service could be created to offer that support.

Rehabilitation's main aim is to facilitate the person to become more independent, enabling them to carry out daily activities more easily. This may come from improving mobility through use of a cane or through the use of assistive daily living devices such as liquid level indicators. It is unsurprising, but also reassuring, that the largest effect of the rehabilitation was on Quality of Life. By increasing their independence and enabling people to manage their conditions their perceived quality of life will improve. Through more independence a person is able to take more Choice and Control, and this is reflected in the significant positive effect of this outcome. The persons Health and Wellbeing might therefore be said to improve. This is similarly evident in the dataset as a significant positive response in the Health and Wellbeing of people using our rehabilitation service.

It was a little surprising that a significant effect was not seen for Mental Health and Personal Dignity outcomes. The former could be attributed to the absence of a specific notion of mental health and the lack of provision of counselling support within the scope of rehab services. Therefore, when reporting on the specific mental health of the person (cognitive and emotional) the link with rehab services may not be clear. Furthermore, the notion of wellbeing is more holistic in nature and therefore maybe an easier measure to attribute than the concept of mental health.

The demographic of the service users is of note. 64.3% of service users were over 75 years old. Therefore, outcomes of economic wellbeing may, arguably, be less of a priority than their holistic wellbeing. The increased independence in this group, although of benefit, is unlikely to result in employment which could be a catalyst for a positive outcome in economic wellbeing.

What next?

It is evident that Rehab services are achieving positive outcomes. There is an opportunity to reflect on this and to ask how we can better support Mental Health and Economic Wellbeing. It might be that these cannot be supported effectively through the rehab model, where emphasis is on independence. Consequently, there is an opportunity to support people with sight loss through alternative services that address financial wellbeing and specific mental health support. In the past Vista ran a project to improve financial capability for people in Leicester city. Taking advantage of a complementary project which focuses on these areas of need will be important to address the holistic requirements of the person in front of us. In the past we have provided mental health support and found that the up take was insufficient to require service provision. In this case appropriate signposting, for example to the RNIB's counselling team, is appropriate.

Final comments

Carrying out in-depth analysis in this way has been useful for identifying the key outcomes from our rehabilitation service. It is encouraging that there are significant positive outcomes achieved through the service that will be of real benefit to people. It also shows that the most effective

outcomes are seen at visit 1 and 2, following the baseline assessment, which confirms the need for robust assessment of the person to identify their needs and provide tailored support.

The estimated economic benefit of the service was also revealed. This shows how this service creates savings to other health and social care provision across Leicester, Leicestershire and Rutland.

As an organisation, this analysis helps us to identify where our services can be used to support outcomes that don't achieve a significant improvement. Mental health and economic wellbeing are notable here. Use of signposting to provision provided by other voluntary sector providers is one way to address this. This paper also brings into focus the need for a service that addresses lifestyle management to support people around financial wellbeing including employment, support in retirement and financial planning. There is opportunity here to work in partnership with organisations already providing this expertise.

References:

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Thetford, C., Robinson, J., Knox, P., Mehta, J., & Wong, D. (2009). The changing needs of people with sight loss. *Occasional paper*, *17*.