

An Outcome Evaluation of Home-Based Rehabilitation for Severely Brain Injured Adults

Description:

Reach has evaluated a rehabilitation programme of a successive series of 13 severely brain injured (STBI) adults, who completed a Reach home-based rehabilitation programme (HBR), using the Brain Injury Community Rehabilitation Outcome Scale (BICRO) as a quantitative measure. BICRO is self-administered by the participants.

Aims:

1. To measure progress made by 13 STBI adults who took part in an inclusive home-based community rehabilitation programme (averaging 10 hours rehabilitation per week for a period of 9 months).
2. To establish which functional aspects were most effectively addressed and which areas were least affected.
3. How Reach can optimise the delivery of home-based rehabilitation and maximise the outcome for the clients.

Executive Summary:

The results show significant improvements in all categories within the BICRO between initial and final testing at the end of a home-based rehabilitation programme.

The results for Personal Care show that by the end of the programme, 85% of clients were entirely self-sufficient in their ability to wash, dress and take care of their hygiene needs.

Another significant improvement was seen in the levels of employment or education in the group. 85% of clients within the study achieved paid part-time, full-time or educational involvement by the end of the rehabilitation programme.

One of the lowest average scores was in relation to socialisation. The results showed that social contact with family members remained static while social contact within the community improved by an average of 31%. Social interaction and inclusion is key to good social skills and is therefore an area for Reach to further develop within our rehabilitation programmes.

These results highlight the effectiveness of such an approach for this type of client and indicated that substantial gains can be made allowing clients to maximise their functional and productive potential through such a rehabilitation approach.

Method:

BICRO – Description of Measure:

The BICRO Scale is well-established and in wide use. It determines the level of handicap in patients with neurological disease or acquired brain-injury and evaluates the outcome of community-based, or outpatient, rehabilitation.

The scales take the form of a self-administered questionnaire with subjective ratings tapping limitations that people with brain injury experience when trying to resume their previous lifestyle. The BICRO Scales can be understood as a “problems list” or of “handicap symptoms”, based on the assumption that the more of these symptoms are present in a given client the greater their subjective sense of disadvantage, the higher their level of handicap and the greater their levels of care needs.

The BICRO Scale is sensitive to problems arising for very heterogeneous reasons (e.g. because of cognitive, sensory, and physical impairments). It can only be used with clients who have already been discharged from hospital and are living in the community trying to cope with the demands of daily life.

There are 6 self-rating scales, comprising between 2 and 6 items each:

- Personal Care
- Mobility
- Self-organisation
- Socialising
- Productive Employment
- Psychological Well-being

Contact with partner / children / parents & siblings were excluded from this review as it was dependant on personal circumstances rather than rehabilitation strategies and outcomes.

Change over time can be monitored by administering the scales on repeated occasions, as in this study; whether the changes are desirable or undesirable for that individual can be determined by comparison with the pre-rehabilitation score.

The Results:

For the purpose of this outcome study Reach compared the self-reported scores at the beginning and the end of rehabilitation. The results are shown graphically for each assessment category and are then summarised quantitatively.

For all categories the lower the score shows a greater level of independence. Therefore high scores relates to high level of dependence.

1. Personal Care

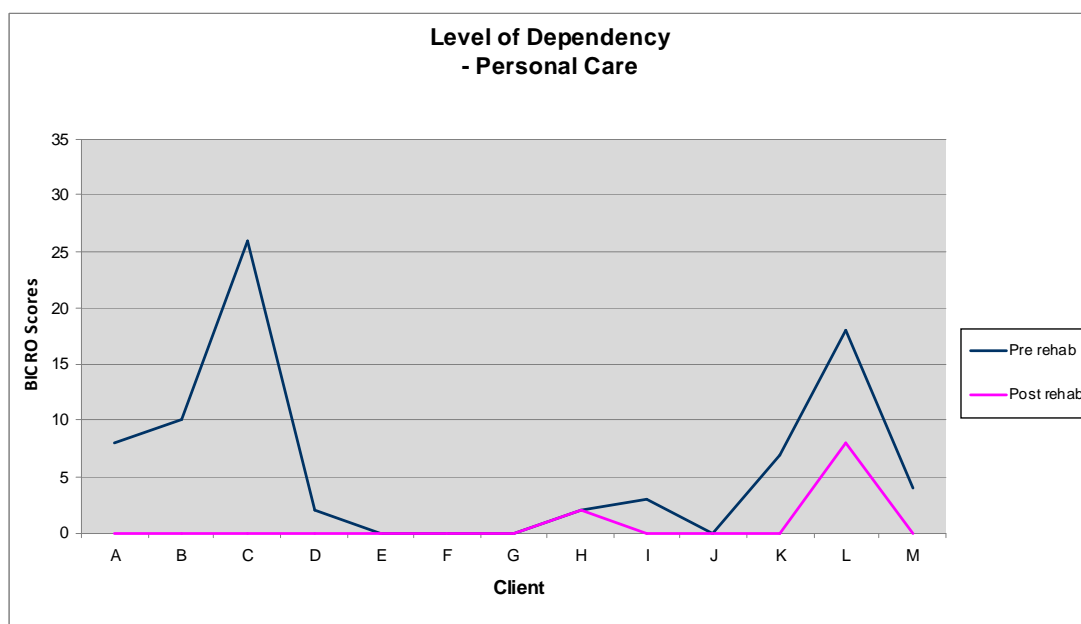


Fig. 1

Findings:

The areas covered within the personal care section include:

- Getting in and out of bed
- Moving from room to room
- Getting to the toilet
- Reaching and using the phone
- Reaching and using the radio or TV

Figure 1 shows that 70% of the cases saw a 100% improvement in functional self care skills.

2. Mobility

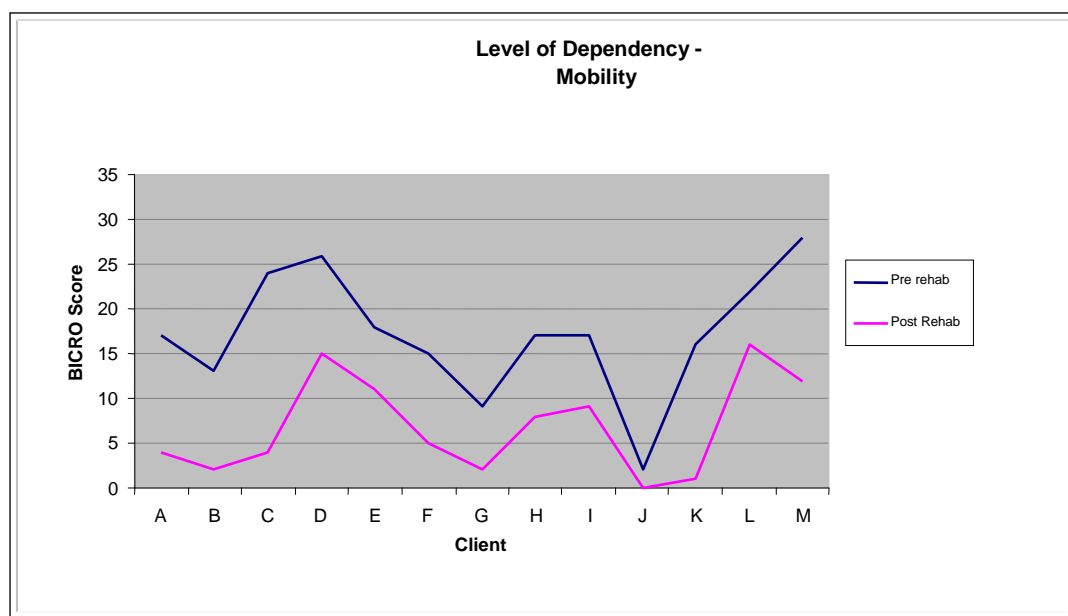


Fig. 2

Findings:

The areas covered within the mobility section included

- Using public transport
- Going to local shops
- Doing laundry (inc. washing, drying ironing)
- Cleaning the home (inc. vacuuming)
- Shopping (for food or household needs)
- Going out for walks or to a park

Figure 2 shows that the range of improvement within the mobility section is between 27% and 94% with an average improvement of 65%.

3. Self-organisation

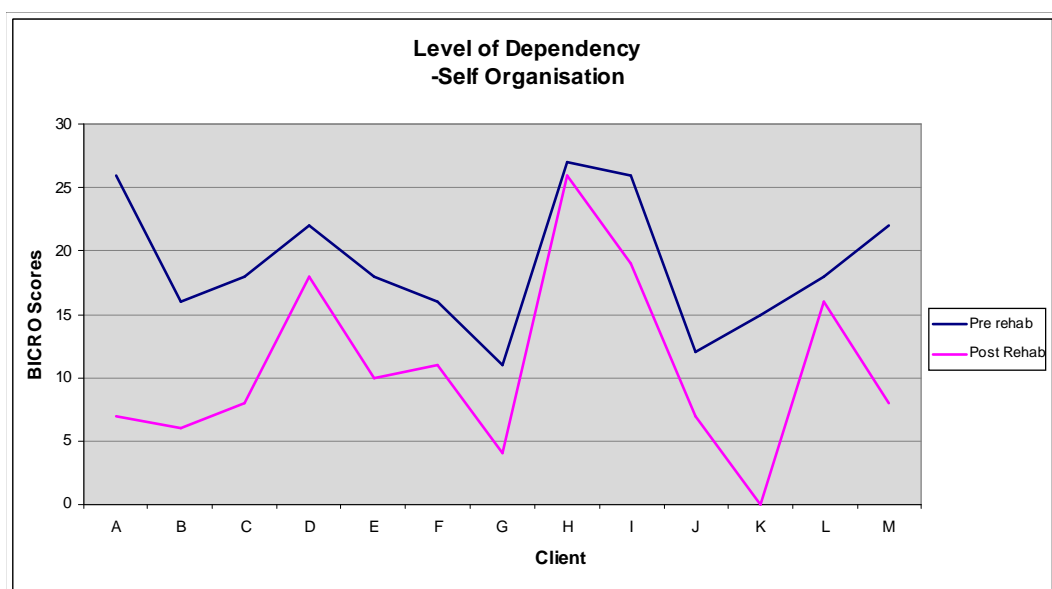


Fig. 3

Findings:

The targeted areas of questions included:

- Keeping track of money
- Dealing with own bank account
- Paying household bills
- Writing official letters (bank, DHSS)
- Writing private letters
- Managing appointments

The range of improvement was from 4% to 100% with an average improvement of 46%.

4. Socialising

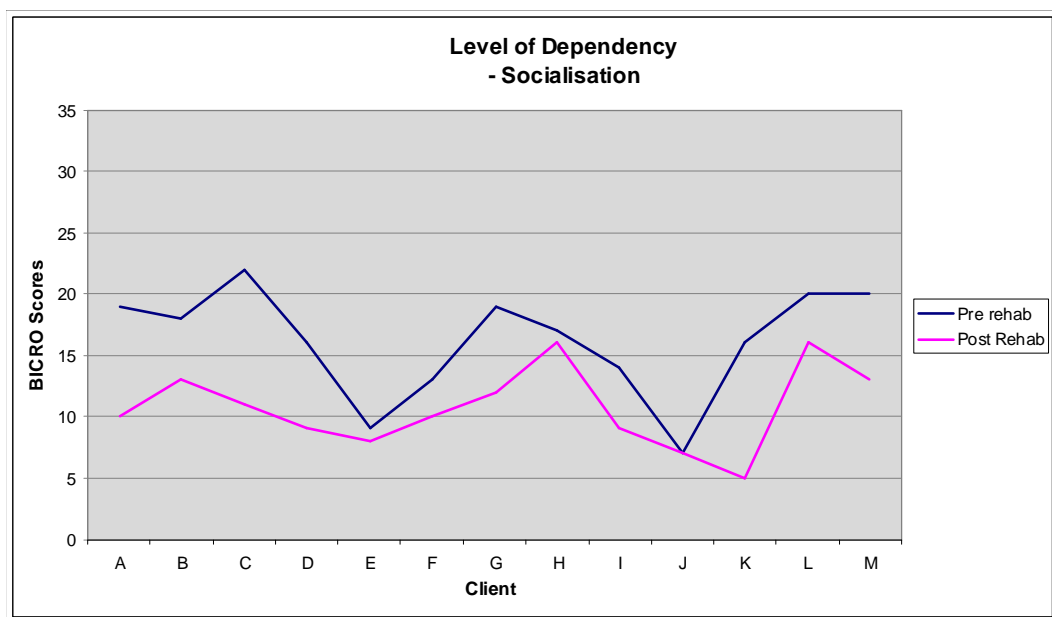


Fig. 4

Findings:

The targeted areas of questions included:

- a. Time spent with partner
- b. Time spent with children
- c. Time spent with mother
- d. Time spent with father
- e. Time spent with brother or sister
- f. Time spent with friends / social contacts

Figure 4 shows that the range of improvement was 0% to 69% with an average improvement recorded at 31%. The zero improvement score was obtained by a client already functioning reasonably well in this area.

5. Productive Employment

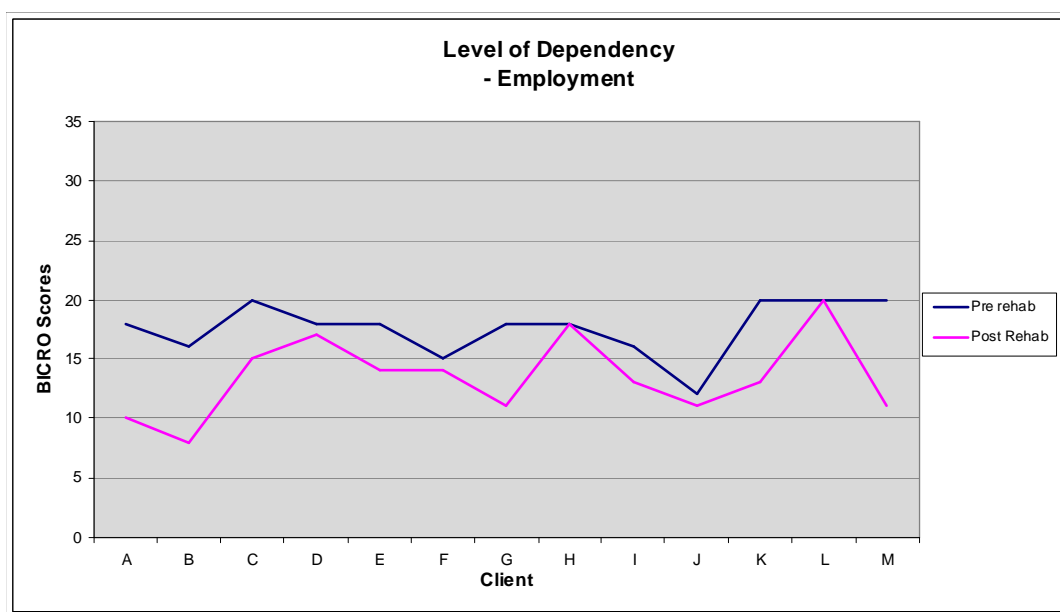


Fig. 5

Findings:

The targeted areas of questions included:

- a. Amount of time doing paid work
- b. Amount of time doing unpaid or voluntary work
- c. Amount of time studying, training, doing courses
- d. Amount of time looking after children

Productive employment refers to remunerative employment on a part-time or full time basis.

Figure 5 shows a range of improvement between 0% and 50%. This highlights that 85% of clients returned to paid full or part-time work at the end point of their rehabilitation programme or were linked into voluntary work projects and continuing education at localised colleges.

6. Psychological Well-being

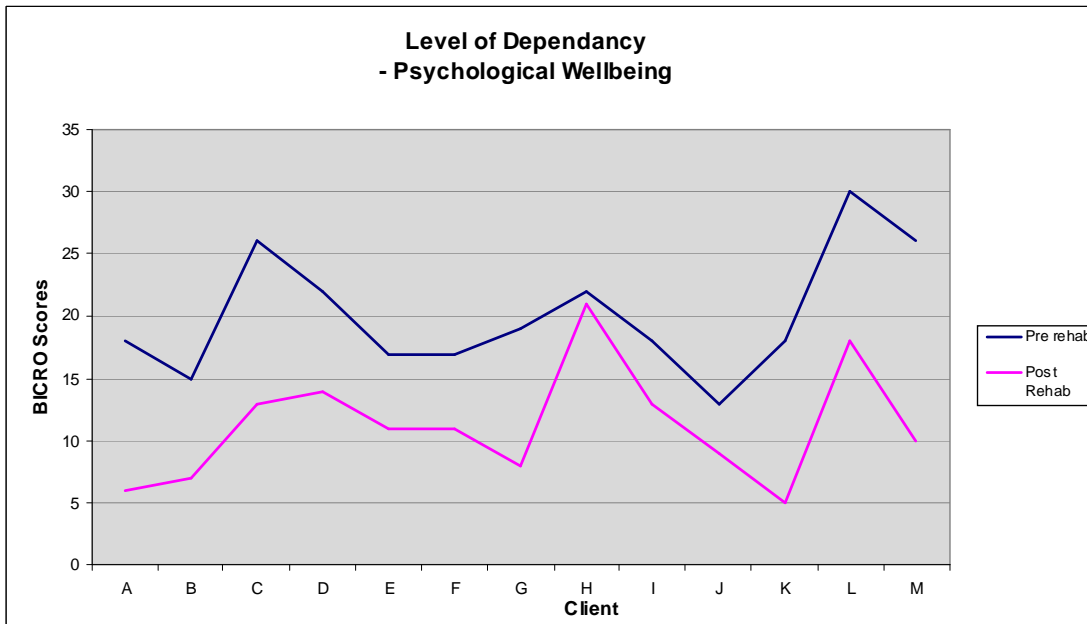


Fig. 6

Findings:

The targeted areas of questions enquired how frequently does the client:

- get angry with themselves
- get angry with others
- feel hopeless about their future life
- feel lonely
- feel worn out
- feel bored

Figure 6 shows that the range of improvement was 5% and 72% with an average improvement of 44%.

Conclusions:

Previous research evidence indicates that self-report scales, of which BICRO's are a typical example, tend to understate actual improvements. In contrast, reports by relatives tended to report a more positive outcome.

Nevertheless, significant improvements were found in all areas measured by BICROs; Personal care; Mobility; Self-Organisation; Socialisation; Productive Employment and Mental Health. All these sections within the BICRO are key areas for clients to achieve more independence to allow progression and maintenance in optimising functional life skills and employment.

Hence, these results can be regarded as, at worst, minimal indications of change; whereas the majority of clients said they improved significantly in most areas. Taking into account the self-reporting "under-reporting" effect, they become very satisfactory.

Moreover, previous evidence shows that behavioural approaches to STBI (of which HBR is an example) result in sustained long-term improvements. Patients retain what they have learned and even improve further as they apply their restored skills to the real world.

These quantitative findings indicate that HBR for STBI works, produces major benefits for STBI victims, across a range of real-life areas of concern to them and their families. In addition the results are of great interest to case managers, lawyers and insurers showing how substantial improvements within functional, emotional, behavioural and vocational spheres of client's daily lives can be optimised, to the benefit of all concerned.

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