Managing behaviours that challenge in brain injury – positive approaches

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Overview

- What are ‘challenging behaviours’?
- What is neuro-behavioural rehabilitation?
- Neuro-behavioural rehabilitation at the RHN - the positive approach
- Case Study
- Questions
Definition of challenging behaviour

“challenging behaviour is behaviour of such intensity, frequency or duration that the physical safety of the person or others is placed in serious jeopardy or behaviour which is likely to seriously limit or deny access to, and use of, ordinary community facilities” Emerson et al.(1995)
What are ‘challenging behaviours’?

Behaviours that arise following acquired brain injury that seriously compromise a person’s ability to engage appropriately and productively in their treatment, rehabilitation and in day to day life.
What are ‘challenging behaviours’?

- They can be active behaviours, such as verbal or physical aggression towards themselves, objects or others.
- They can be passive behaviours, such as non-engagement, reduced emotional responses, or the inability to make goals about their future.
- Or they may involve inappropriate social behaviour, including sexual disinhibition.
What are ‘challenging behaviours’?

Behaviours that challenge are common among brain-injured adults and can impede rehabilitation if not treated professionally. Issues that may occur include:

- Aggression towards others
- Self-injury
- Deficient judgment and problem-solving due to cognitive deficits
- Frequent agitation
- Prolonged confused state
- Seizure disorders related to behavioral problems and aggression
- Problems with attention, filtering and focusing
- Significant memory and cognitive disabilities
- Disruption of sleep/wake cycles
- Emergence of mental health issues or exacerbation of pre-existing mental health or substance abuse issues
- Other cognitive and behavioral problems which prevent the successful completion of traditional rehabilitation programs
Why do challenging behaviours occur?

1. Organic Damage
2. Cognitive Impairment
3. Psychiatric/psychological factors
4. Environmental factors
5. Physical factors
What is neuro-behavioural rehabilitation?

- Neuro-behavioural rehabilitation provides hope and opportunity for individuals struggling from the severely disruptive and potentially dangerous behaviours that can result from brain injury.
- It is a model of working that works with and alongside standard neuro-rehabilitation.
- It draws on learning theory from psychology.
- It includes comprehensive behavioural assessments, monitoring and measuring of the target behaviours, and treatment strategies that are used by the whole multi-disciplinary team.
Learning theory

Assumptions…

- All complex behaviour is learned and shaped;
- Behaviour can be changed through rewards and punishment;
- Behaviour is determined by the environment (i.e. determined by the consequences or anticipated consequences of that behaviour);
- Some of what we learn is not the direct result of reinforcers, but rather the result of observing others and the consequences of their actions and modelling our behaviour on this.
Neuro-behavioural rehabilitation at the RHN

The Neuro-behavioural rehabilitation unit (NRU) is:

- A 12 bedded inpatient unit in a purpose-built facility on the grounds of the RHN
- Specialising in the assessment, rehabilitation, treatment and disability management of individuals with complex neuro-disability and challenging behaviour
Staffing…

- RN’s and HCA’s
- Consultant in Rehabilitation Medicine
- Ward Doctor
- Music therapists
- Occupational therapists
- Physiotherapists
- Speech and language therapists
- Clinical psychologists
- A dietitian
- A social worker
- Assistants for all disciplines
Facilities

- Biomedical engineering
- Electronic assistive technology
- Computer room
- Art room
- Recreation therapy and leisure programmes
- Carer’s support service
- Hydrotherapy pool
- Music library
- Dentistry
- Podiatry
- Pharmacy
- Bank and hairdresser!
Philosophy of the Unit

- Positive behaviour support approach
  - Based on the approach advocated by the Institute of Applied Behavioural Analysis (IABA)
- 24/7 programme
- Non-aversive strategies and does not include punishment schedules, (e.g. no time out or token economies)
- Assumption and belief that all behaviour has a function.
Punishment

- Punishment is on a continuum, from the obvious (e.g. electric shock) to more subtle (e.g. denial of access to activities)
- Two types of punishment:
  - The contingent **presentation** of a stimulus or event resulting in a future decrease in the behaviour (e.g. verbal reprimand).
  - The contingent **withdrawal** of a stimulus or event resulting in a future decrease in the behaviour (e.g. loss of privileges, time-out).
- Aversive
  - A stimulus or event that one would ordinarily want to avoid.
Why not punishment or use of aversive strategies?

Why should it be avoided?

- Ethical considerations (e.g. aberrant behaviour may be communicating a legitimate message: ‘I’m scared/lonely’)
- Legal considerations (Human Rights Act, Capacity Law)
- Empirical and clinical considerations
- May inadvertently reinforce the behaviour.
Outcomes

- Speed of effects
- Durability
- Generalisability
- Side-effects
- Social validity
- Clinical validity
# Model for treatment planning

**PROACTIVE STRATEGIES**

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**REACTIVE STRATEGIES**

- Active listening
- Stimulus change
- Strategic recapitulation
- Crisis intervention
Proactive strategies (or preventative strategies)

- Designed to produce an enduring reduction in challenging behaviour combined with an increase in general functioning.
- Time intensive and takes time to see results.
- Includes 3 components: i) ecological changes; ii) positive programming (building skills); iii) direct treatment (focused support).
Pro-active strategies…

1. **Ecological Manipulation**
   Definition – changes in the physical, programmatic and interpersonal environment to fit the person’s characteristics and needs.
   - Physical: setting, lights, noise.
   - Interpersonal factors: social interactions, culture, expectations, inclusion in treatment, ensuring a good match between patient and environment.
   - Programmatic factors: refers to service environment. Task difficulty, guidelines, goals and objectives, opportunity to learn new skills and opportunity to feel empowered (e.g. patient involvement in goal settings and their own guidelines).
2. **Positive Programming (Building Skills)**

**Definition:**
‘Longitudinal instruction designed to teach skills and competencies that facilitate behavioural change for the purpose of social integration’ IABA. (i.e. Teaching the individual more effective and socially acceptable ways of getting their needs met.)

- General skills development
- Teaching functionally equivalent skills
- Teaching functionally related skills
- Teaching coping skills
Pro-active strategies

Positive programming (building skills)

General Skills Development

Refers to generic rehabilitation, during which the MDT addresses range of functions affected by the brain injury. Examples include:

- personal activities of daily living
- transfers
- eating and swallowing
- cognitive rehabilitation
Pro-active strategies…

**Positive programming (building skills)**

**Teaching alternative, functionally equivalent skills:**

- Providing the individual with the skills necessary to achieve their goal without resorting to the problem behaviour (e.g. teaching communication skills such as using a word card instead of hitting).
- Needs to be motorically, cognitively and physically easier for the individual to perform than the problem behaviour.
- Must be appropriate for chronological age.
- Must have functionality (i.e. activity must serve a legitimate purpose and must provide some reinforcing feedback or payoff for the person).
Pro-active strategies

Positive programming (building skills)

Teaching alternative, functionally related skills:

Teaching functionally-related replacement behaviours for problematic behaviours (e.g. making a sandwich when hungry, leaving a noisy area when upset). Includes:

- Discrimination
- Choice
- Predictability and Control
- Rules
- Stimulus control
Pro-active strategies...

Positive programming (building skills)

Teaching coping and tolerance:

- We need to teach individuals how to effectively manage and tolerate the naturally occurring stresses of everyday life (e.g. delayed gratification, disappointment, criticism).
- Vital component of a treatment programme in order for the individual to function effectively and independently in ‘real life’.
- Examples include:
  - Applied relaxation training
  - Anger management
  - Anxiety management
  - Problem-solving
  - Assertiveness training
3. **Direct Treatment** *(focussed support strategies)*

**Definition:**

- Strategies used to reduce, and if possible, eliminate the need for a reactive strategy.
- Plays a role in producing rapid control while we pursue long-term goals from ecological changes and positive programming.
- Uses different schedules of reinforcement (rewards)
Pro-active strategies…

**Direct Treatment (focussed support strategies)**

Examples of reinforcement schedules:

- Reinforcing lower rates of the challenging behaviour
- Reinforcing alternative behaviours
- Reinforcement after a specified period of no challenging behaviour
Reactive strategies

- Designed to gain rapid control of a situation.
- Has a narrow role in the treatment programme

Some strategies include:
- Facilitative strategies (e.g. active listening)
- Redirection and instructional control
- Stimulus change
- Change setting conditions
- Geographical containment/inter-positioning
- Counter-intuitive strategies (e.g. strategic recapitulation)
Reactive strategies

- Crisis intervention as last resort
  - control and restraint
  - medication
- Risk of responding reactively;
  - i) it may reinforce the target response and therefore have a counter therapeutic effect
  - ii) it may contain an aversive quality and may contribute to escalating the situation instead of controlling it.
  - iii) they do not facilitate long term behaviour change
  - iv) effectiveness relies on consistency
  - v) can’t always use them in the community
The development of pro-active and reactive strategies

Functional Analysis
A process that seeks to identify the problem behaviour, to determine the function or purpose of the behaviour and to develop interventions to teach acceptable alternatives to the behaviour.

It involves:
1) Identifying and detailing the behaviour that needs to change;
2) Collecting the data on the behaviour (e.g. ABC charts);
3) Developing a hypothesis about the reason for the behaviour;
4) Evaluating the effectiveness of the intervention (e.g. using behaviour graphs).
Behaviour Support Plans and Behaviour Guidelines

From detailed functional analysis we then produce comprehensive behaviour support plans (BSP) and behaviour guidelines that are used by the entire team 24/7.

The BSP and guidelines are monitored for effectiveness through the continual collection of data by staff. Then, if necessary, they are altered accordingly.
Overall process…

- Patients are admitted for an initial 12 week assessment period.
- Discharge planning starts from the beginning.
- Comprehensive reports are supplied to the funding body.
- For our most recent admissions the average length of stay has been 7 months.
Case Study - M

- 63 year old male
- Severe traumatic brain injury (4 years prior to the admission)
- History of learning difficulties, depression, and schizophrenia.
- Living in rented accommodation with 24 hour carers – however, placement breakdown due to increased challenging behaviour
Case Study - M

Active behaviours:
- Physical aggression
- Verbal aggression

Passive behaviours:
- Refusal to eat
- Non-engagement
- Reduced emotional responses

Inappropriate social behaviour
Case Study - M

- Severe cognitive difficulties
- Underweight
- Severe sleep disturbance
- Reduced mobility
- Risk issues
Case Study - M

Functional Analysis indicated the following contributing factors:

- Effects of the brain injury
- Overstimulation
- Learned behaviour
- Pain and poor sleep
- Pre-injury personality characteristics
Case Study - M

Ecological changes:

- One-to-one nursing required, changed the way in which this was implemented
- Own room, quieter side
- Ability to move in and out of groups/activities
- Social interactions – feel included and empowered, involved in decision-making
Case study - M

Positive programming:

- General skills development – chunking of tasks that increased independence
- Teaching coping and tolerance
- Teaching functionally equivalent/related skills
Case study - M

Direct Treatment (or focussed support strategies)

- Used natural, social and tangible reinforcers to shape behaviour
- Positive reinforcement – initially reinforced any behaviours that were close to the desired behaviour
- Took a lot of co-ordination and consistency
Case study - M

Reactive Strategies:

- Active listening, facilitating communication
- Redirection to other tasks (e.g. going for a walk or ‘visiting’ another staff member)
- Instructional control – providing him instructions on his expected behaviour
- Change of setting conditions
Case study - M

Themes:
- Choice
- Control
- Concentration
- Connection
- Concern
Case Study - M

Choice:
- Of whether to attend or not
- Choice of instruments
- Choice whether to play or not
- Choice of songs
- Choice of whether to sing or not
Case Study - M

Control:

- Important to have these specific choices
- Important that experienced control over his environment
- This eased his engagement and involvement over time
Case Study - M

Connection:

- Content – musical material, 60s popular music, hymns, improvisation
- Filled in words of songs
- Sang through whole verse and chorus
- Got up and danced
- Gradual use of musical instruments – e.g. keyboard, tambourine
Case Study - M

Concentration:
- Increased ability to concentrate within a session
- Increased concentration with each individual activity
Case Study - M

Concern:

- Responded to warmth
- Slightly maternal approach
- Asking to be cared for
- Balance between this and encouraging independence
Case Study - M

Conclusion:
- Responses varied over time
- General decrease in challenging behaviour
- General improvement in mood
- General increase in engagement
Case Study - M

Overall outcomes:
- Significant decrease in challenging behaviours
- Significant improvement in sleep pattern
- Weight gain
- Improved appetite
- Some improvement in mobility
- Less distractible and more able to engage
Case Study - M

What happened?

● Graded discharge back to the community
● Specialist brain injury care team brought in
● Overlap between – specialist care team shadowing our team for several weeks
● Settled well, happier, going out
● Maintenance of gains 9 months later
Take home messages!

- The positive behaviour support approach works well in reducing challenging behaviour.
- It works with and alongside standard neuro-rehabilitation.
- Patients, staff, families, and carers find the approach rewarding and empowering.
- It transfers well into community settings.
- In its purest form it requires professional intervention but aspects can easily be adopted in other settings where those resources may not be available.
To arrange a visit, or to enquire further about our service, please call or email:

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