

# Single case study: The effectiveness of an adapted executive function programme delivered by SLT/OT in improving participation and independence following a severe TBI



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## Introduction

Executive dysfunction is a common impairment following traumatic brain injury that affects an individual's ability to complete/regulate skills associated with decision making and problem solving.

The *Executive Plus/Step: Problem Solving Training and Emotional Regulation training* has demonstrated to be an effective group programme that reduces executive dysfunction and improves problem solving through group and individual sessions over a 6 month recommended time frame.

## Methods

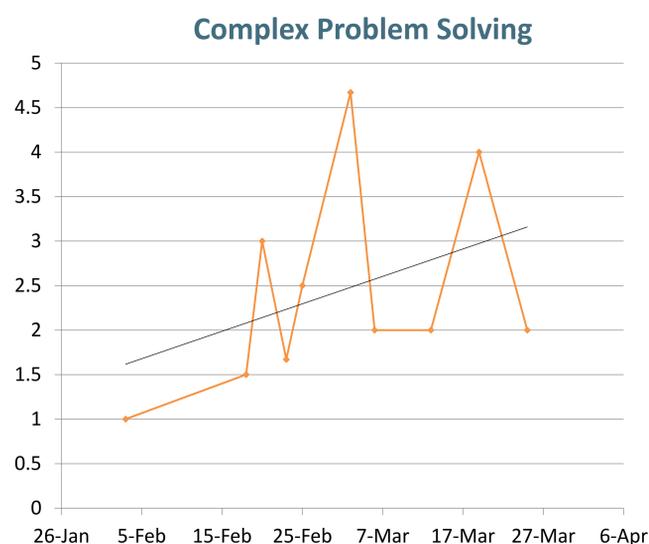
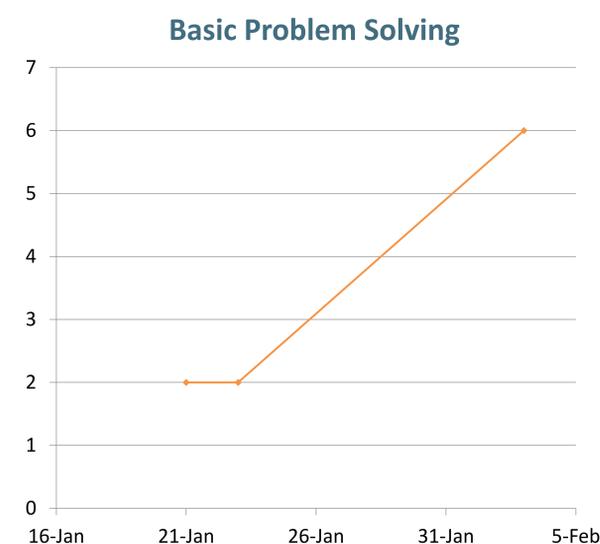
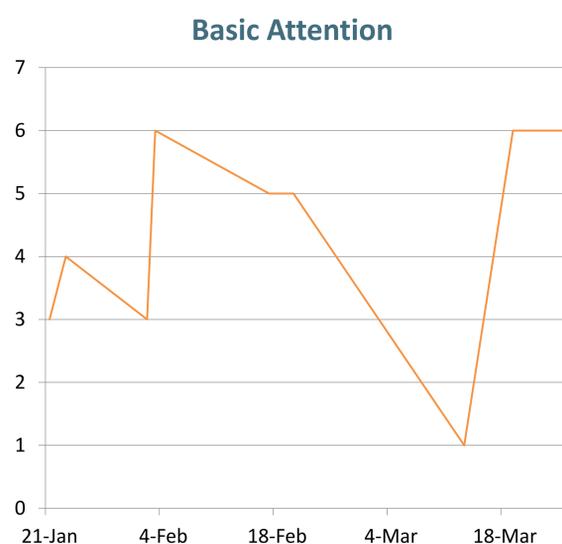
- 21 year old male with a severe TBI.
- Adapted executive functioning programme utilising the S.W.A.P.S. frame-work:
  - Stop! Is there a problem?
  - What is the problem? Should I try to solve it?
  - Alternative solutions – what are they?
  - Pick and Plan.
  - Satisfied with the plan? With the outcome?
- OT/SLT joint sessions.
- Average of 3-4 hours a week for 8 weeks.
- Completed a qualitative thematic analysis of the clinical notes coding for themes related to attention and problem solving using the Functional Independence Measure (FIM), averaging the scores over the course of the programme.

## Results

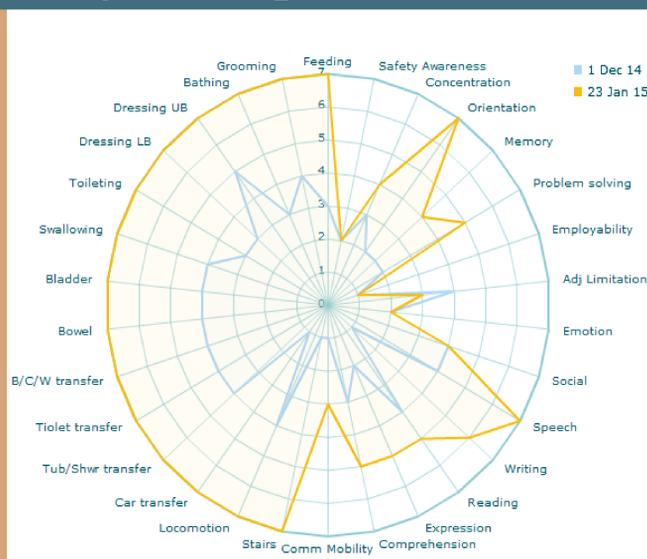
The following results seen after using the programme :

- ✓ FIM/FAM gain from admission to discharge of an increase of 90 points overall.
- ✓ Analysis of the clients functioning and overall participation were also coded focusing on attention and problem solving.
- ✓ Significant improvements of attention were not seen.
- ✓ Increase for basic problem solving from a FIM gain of 1.8 to 6.
- ✓ Increase for complex problem solving from a FIM gain of 1.5 to 3.2.

## Results



## FIM/FAM Splat



## Discussion

Overall the modified problem solving and attention programme delivered by a SLT and an OT was an effective framework to teach and deliver an executive function skills set that allows a client to make informed decisions and effectively solve basic problems.

The future use of this programme requires carry over into the community by an SLT or OT with client centred practical application and robust training of external visual aids.

Problem solving education

SWAP's framework

SLT/OT Adapted Executive Function Programme

Attention – External visual supports

Client centred practical application

## References

Cantor, J., Tsaousides, T., Gordan, W.A., Brown, M., Ashman, T., Dams-O'Connor, K. 2014. Manual for executive plus/step: problems solving training and emotional regulation training. Brain injury research centre of Mount Sinai, Icahn school of medicine, New York, NY.

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