

Southampton Holistic Independence Participation Score (SHIPS): Development and use of a new scoring system to assess the impact of rehabilitation for children presenting with medically unexplained symptoms (MUS)

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Introduction:

- Children with medically unexplained symptoms may present to Paediatric Neurology and be diagnosed with a functional disorder
- These patients often require intensive rehabilitation from multiple disciplines to help restore normal function
- Due to the wide range of physical and psychological manifestations of this population of patients current available objective outcome measures are insufficient to encompass the whole cohort and measure efficacy of treatment
- Assessing outcome post rehabilitation is challenging and motor outcomes alone are insufficient to demonstrate a change in function

Objective:

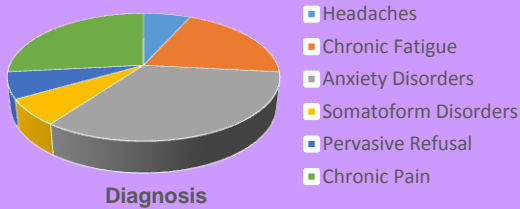
- To create a scoring system, encompassing physical, social and emotional participation in everyday life, that can be used pre and post rehabilitation as an outcome measure for children presenting with a variety of MUS to paediatric departments including neurology.

Method:

- A team experienced in rehabilitating children with MUS identified 11 key areas to assess functional independence to enable the creation of an outcome measure
- These areas were then broken down into subsets yielding a maximum score of 44: the Southampton Holistic Independence Participation Scoring System (SHIPS)
- All patients admitted to Bursledon House (Southampton Children's Hospital specialist unit) with a diagnosis of MUS in 2015 were assigned a SHIPS score on admission and discharge

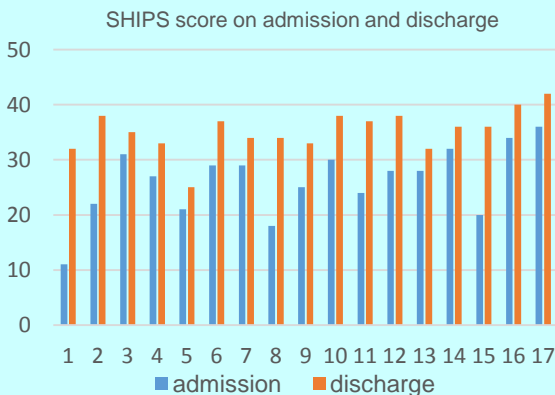
Demographics:

- 17 Children 5 males : 12 females
- Median age 13.4years (range 5 -16)
- Mean length of stay 64 days (range 17-302)



Results:

- Mean SHIPS score on admission: 26.2 (range 11-36)
- Mean SHIPS score on discharge: 35.3 (range 32-42)
- All children demonstrated an increase in their SHIPS score during admission: Median change 8 points



Score	1	2	3	4
Activity				
School	Unable to access school/declining to participate in school.	Participates in home schooling/hospital school.	Able to participate in part time school timetable.	Fully re-integrated in full school timetable.
Community	Unable to access the community.	Requires full assistance to access community.	Able to access community utilising strategies.	Able to fully access community without concerns.
Self care	Unable to undertake self care without full assistance.	Requires some assistance to complete self care.	Able to utilise equipment and strategies to undertake self care.	Able to complete self care independently.
Managing their day	Unable to manage their day without full assistance.	Requires some assistance and prompts to manage their day.	Able to utilise strategies/ techniques to manage their day.	Able to independently manage their day.
Hobbies	Unable to participate in hobbies.	Able to partake in hobbies with full assistance.	Able to partake in hobbies with adaptations and strategies.	Able to fully participate independently in hobbies.
Mobility	Dependant on wheelchair.	Use of wheelchair outdoors, walking aid indoors.	Use of walking aid indoors and outdoors.	Independently mobile no walking aids.
Physical Exercise	Unable to participate in physical exercise.	Able to undertake some parts of physical exercise with rests /adaptations.	Able to undertake all physical exercise but requires rests/adaptations.	Able to fully participate in physical exercise without concerns.
Social	Social skills are poor. Egocentric. Fleeting awareness in relation to social norms. Little reaction to social environment.	Makes effort, but is unsure. Stereo-type handling of situations. Communication is superficial.	Often a follower in social situations. Will manage fairly well in a variety of situations. Participate in passive way.	Interacts with a variety of people. Consistently socially acceptable behaviour.
Emotional responses	Emotions are either strongly expressed or very blunted. No initiative, effort is not sustained.	Low frustration tolerance, high anxiety, poor self esteem and poor emotional control but some norms awareness. Variable levels of effort and concentration.	Manages well with predictable situations as has good awareness of behaviour and expectations. Needs support to manage the unexpected.	Full range of emotions - makes effort to manage these. Does as expected /required for the situation and is able to sustain this without support.
Upper limb	Unable to throw and catch a ball with either hand, requires full assistance to tie shoe laces, handwriting illegible.	Requires assistance when tying shoe laces, requires some assistance when throwing/catching.	Independent with compensatory strategies, Full ROM in one arm, limited in other.	Independent with bilateral upper limb activities, Full ROM in both upper limbs, handwriting age appropriate.
Lower limb	Unable to stand/weight bare bilaterally.	Able to stand and transfer weight with assistance/aid. Walks with an altered gait pattern.	Able to SLS with support, poor propulsion, able to run with altered gait pattern.	Able to achieve high level function can independently hop, jump, and run with no limitations.

Conclusion:

- SHIPS is a outcome measure that can be utilized by practitioners experienced in treating children with MUS presenting with a range of symptoms and presentations
- Ongoing collection of data is required to demonstrate the effectiveness of this outcome measure in a variety of settings including inpatient and outpatient
- Further work is required regarding the specificity of the scale, primarily regarding the motor aspects