HOW IS SENSORY IMPAIRMENT OF THE UPPER LIMB POST STROKE BEING ASSESSED WITHIN THE ACUTE SETTING?

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Acknowledgements:

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Dr Chris Barr, Flinders University, Adelaide

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BACKGROUND

- 50-80% of people who have had a stroke experience sensory loss in their affected arm

(Kessner et al., 2019; Doyle et al., 2010)

- Sensory impairment has an adverse effect on hand function

(Pumpa, Cahill & Carey, 2015)

- Sensory impairment is linked with longer hospital stay, reduced likelihood of being discharged home, lower functional levels & reduced long term participation

(Doyle, Bennett & Dudgeon, 2012)

- Sensory assessment and treatment are less likely to be adequately addressed compared with motor impairment

(Carlsson et al., 2018)

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BACKGROUND: PREVIOUS STUDIES

Research

Clinical decision making when addressing upper limb post-stroke sensory impairments

Susan Doyle,[1] Sally Bennett[2] and Louise Gustafsson[3]

Key words:
Sensory impairment, occupational therapy, clinical decision making.

Introduction: This study explored factors influencing occupational therapists' clinical decision making when choosing to assess upper limb post-stroke sensory impairments (ULPSSI) and selecting interventions.

Method: A survey of 187 American occupational therapists working with stroke survivors.

Australian Occupational Therapy Journal

Australian Occupational Therapy Journal (2015) **62**, 93–104 doi: 10.1111/1440-1630.12170

Research Article

Somatosensory assessment and treatment after stroke: An evidence-practice gap

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Cahill *et al. BMC Health Services Research* (2018) 18:34
DOI 10.1186/s12913-018-2829-z

BMC Health Services Research

STUDY PROTOCOL Open Access

Changing practice in the assessment and treatment of somatosensory loss in stroke survivors: protocol for a knowledge translation study

Liana S. Cahill[1,2,3*], Natasha A. Lannin[1,4], Yvonne Y. K. Mak-Yuen[1,2], Megan L. Turville[1,2] and Leeanne M. Carey[1,2]

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THE GAP

Study aims:

1. Provide an overview of current practices of occupational therapists working within acute stroke units
2. Identify barriers and enablers for the assessment of sensory impairments in patients post stroke within acute care

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METHODS

Mixed Methods Research Design

Quantitative Data

Online survey using open ended & multiple choice questions;

Nationwide;

AHPRA registered occupational therapists

Qualitative Data

2 Focus groups;

Melbourne based;

Recruitment via OT Australia & a Melbourne Health network

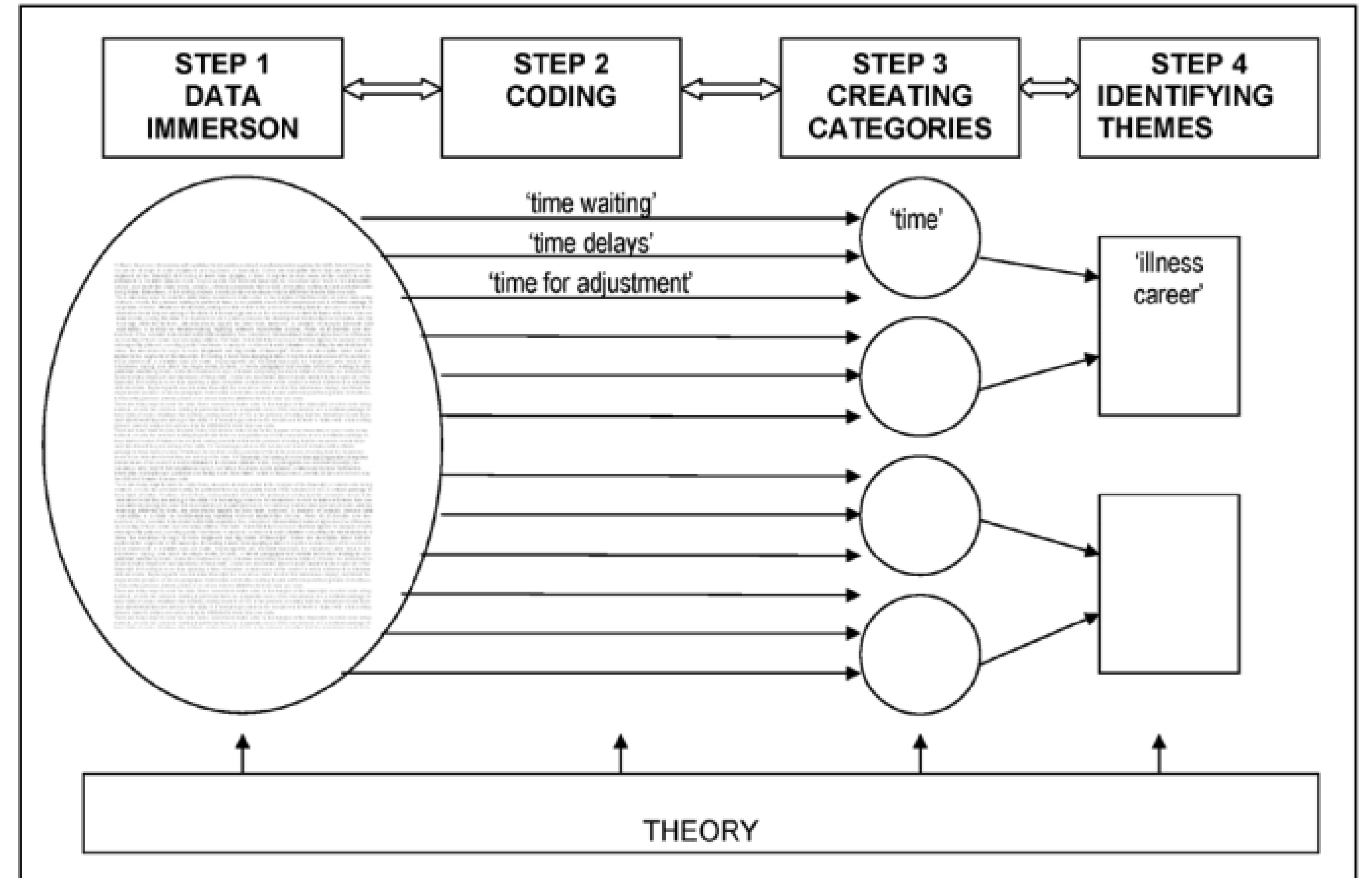
DATA ANALYSIS

Mixed methodologies

Results triangulated

SPSS statistics software

Figure 1: Four steps of data analysis to generate best qualitative evidence.



Green et al., 2007

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RESULTS: DEMOGRAPHICS

Characteristic	Variable (n=85)	Variable (%)
Highest level of education		
Bachelor degree/entry masters degree	62	72.9
Postgraduate diploma/certificate	2	2.4
Postgraduate masters	19	22.4
PhD	1	1.2
Not reported	1	1.2
Years experience with stroke clientele		
<1	10	11.8
1-2	11	12.9
3-5	23	27.1
6-10	23	27.1
>10	17	20.0
Not reported	1	1.2
Grade of Occupational Therapist		
1	13	15.3
2	36	42.4
3	24	28.2
4	9	10.6
Not reported	3	3.5

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RESULTS:

- 76.5% strongly disagreed that somatosensory assessment was **not** part of their role
- 79% agreed or strongly agreed *time* was a limiting factor for somatosensory assessment
- *Years* of experience working with stroke patients was not associated with whether therapists used *standardized assessments (p=0.227)*
- *Geographical area* was not associated with whether they completed standardized assessment *(p=0.542)*
- *Grade* of occupational therapist did not affect their confidence in recommending and prescribing sensory rehabilitation within the acute setting (*p=0.793)*

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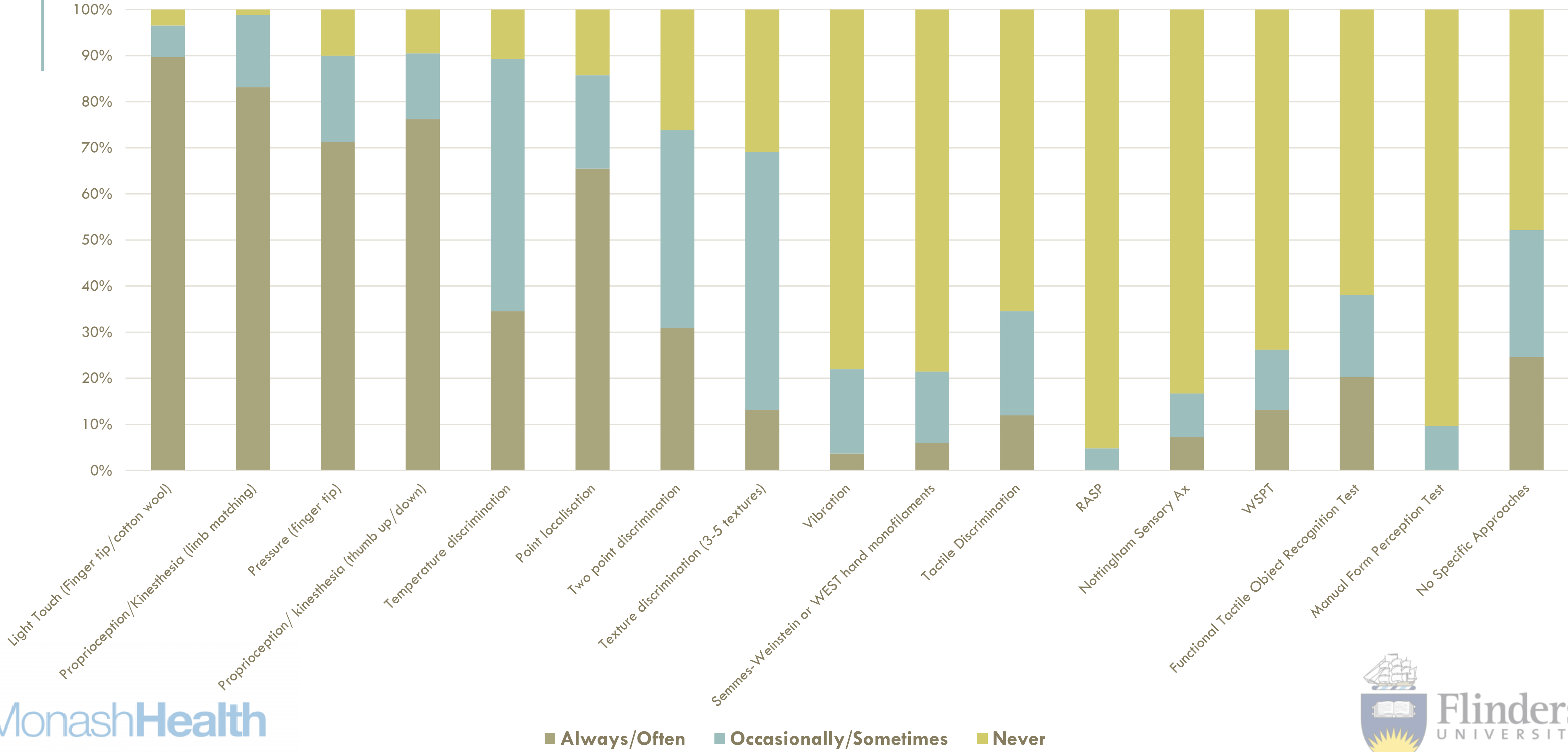
RESULTS: SENSORY ASSESSMENT USED POST STROKE



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RESULTS: QUALITATIVE DATA

Themes:

1. Organisational Factors
2. Patient Factors
3. Clinical knowledge/ stroke guidelines

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ORGANISATIONAL FACTORS

- Quick screens to identify vital things that need to be assessed in more detail
- Time limitations
- Caseload pressures
- Assessment choice based on immediate resources
- Discharge destination of patients

"discharge patients and make quick decisions"

"Acute hasn't changed, that we are still busy and we still don't get to it"

"I think as well with the time pressures….large range that we have to cover when assessing the upper limb….often you will not do a really in-depth assessment"

PATIENT FACTORS

Patient factors identified:

- Cognitive impairment
- Communication impairment
- Fatigue
- Patient's perception of importance of sensation
- Patient's goals

"too early to complete extensive assessments as we see them within 24 hours post stroke..fatigue is often a barrier"

"I think it's even to do with patient priorities as well. I don't think they fully understand what's gone on with their arm yet"

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CLINICAL KNOWLEDGE/ STROKE GUIDELINES

- Evidence within current stroke guidelines
- Influence of local guidelines
- Functional/occupation based assessment
- 46.43% "somewhat agreed" they were lacking in knowledge of assessing sensory impairment

"you've got motor evidence for motor retraining that's a strong recommendation than you've got a weak sensory recommendation….maybe that's where I will invest my time"

"you don't walk away with a great deal of confidence, I don't think in your assessment"

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DISCUSSION

- Standardised assessment is not used routinely, echoing results of previous studies
- Large scope of occupational therapy assessment in acute stroke units
- Reoccurring theme of time and lack of knowledge
- Strength of evidence in current stroke guidelines

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IMPLICATIONS FOR OCCUPATIONAL THERAPY PRACTICE

Occupational therapists recognize:

- the importance of sensation in return of function
- acknowledge importance of standardised assessment but it is under utilised

Time and resources are largest barriers

Feasibility of completing standardized assessment within acute setting

A tool kit that is quick to administer would assist acute therapists

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LIMITATIONS

Limitations:

- Small sample sizes within focus groups
- Time limitations given to complete research project
- Method of recruitment
- Inclusion of occupational therapists only

THANK YOU

QUESTION TIME

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