Title
Do hardy personality traits influence recovery post stroke?

Presenting Author

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Overview of this presentation

• Explanation of the concept of hardiness
  -hardiness versus resilience

• Exploring hardiness in stroke survivors
  -Study design

• Implications for practice
Show of hands....

Do hardy personality traits influence recovery post stroke?
What is hardiness?

• Hardiness is conceptualised as a constellation of personality characteristics that function as a resource during encounters with stressful life events and it relates to how individuals perceive and cope with such events.¹

• Kobasa (1979)² established that people who experience high degrees of stress but remained healthy, have a personality trait of hardiness that differentiates them from those who become ill under stress.
Unraveling the mystery of health

Hardiness

The 3 C’s of hardness

Control
- Strong sense of control over events in their life, can overcome their experiences

Commitment
- Highly committed and involved in tasks, strong sense of purpose

Challenge
- View life events as challenges to overcome – change is an opportunity for development
## Hardiness v’s Resilience - What is the difference?

<table>
<thead>
<tr>
<th>Hardiness</th>
<th>Resilience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enduring personality trait</td>
<td>Dynamic modifiable process</td>
</tr>
<tr>
<td>Personality trait that contributes to resilience</td>
<td>The ability to bounce back from adversity</td>
</tr>
<tr>
<td>Hardiness is an explanatory term</td>
<td>Resilience is a descriptive term</td>
</tr>
<tr>
<td>Hardiness is measured at the individual level.</td>
<td>Resilience extends into systems.</td>
</tr>
</tbody>
</table>
Studies on hardiness

• Pollock (1993)\(^3\) examined hardiness in adults with chronic illness/disability and found that hardiness was positively related to psychosocial adaptation.

• Navuluri (2001)\(^4\) found that women possessed higher scores in commitment/challenge over men in adherence to different self-care activities and management of diabetes.

• Wallace et al. (2001)\(^5\) explored the influence of age on hardiness & found that increased age is associated with less hardiness.

• Hamama-Raz & Solomon (2006)\(^6\) demonstrated that individuals adapted to the diagnosed of cancer was better predicted by the personal traits (hardiness) than by their socio-demographic features and features of their illness.

• Brooks (2008)\(^7\) demonstrated that individuals with bleeding disorders who had higher hardiness had better psychosocial adaptation.
Designing a study to explore hardiness in stroke survivors

• When is it best to measure outcome?

• What is your outcome measure going to be?

• What other factors could influence outcome post stroke?
When is it best to measure outcome?

• Acute stage
• Sub acute stage
• Rehabilitation stage
What is your outcome measure going to be?

• Stroke recovery is typically viewed in terms of clinical indicators that measure physical function.

• Traditionally, there has been a reliance on stroke research to focus on physical function\textsuperscript{9,10,}.

• Although well justified, there has been criticism of this approach as physical function alone cannot account for other mediating factors during the recovery process\textsuperscript{11,12,13}.

• Although, physical function is clearly an important health outcome, it is also important to explore the ability of the individual to manage their situation from both a physical and psychosocial perspective.
Outcomes to consider:

• Patient’s ability to perform activities of daily living (ADL) are key factors in stroke recovery and these factors are also related to psychological factors.\textsuperscript{14}

• Stroke survivors are more likely to define recovery as a return to previously valued activities and community re-integration.\textsuperscript{15,16}

• The International Classification of Functioning, Disability and Health (2001)\textsuperscript{17} highlight the importance of biopsychosocial factors that are important to stroke recovery.
Outcome needs to measure physical and psychosocial health
What factors influence outcome post stroke?

- Rapid treatment
- Co-morbidities
- Stroke severity
- Pharmacological treatment
- Complications post stroke
- Early mobilisation
- Memory deficits
- Intense therapy
- Age
Adaptation

• Adaptation refers to the change that occurs during recovery and indicates the outcome of reintegration with the environment despite the restrictions placed on the individual during to their illness\(^1\).  

• Psychosocial adaptation has been described as a multi-dimensional temporal process of responding to the physical, psychological and social changes that occur with the onset and experience of living with a disability or chronic condition such as stroke\(^1\).
Study design

- Hardiness
- Status Variables
- Physical Function
- Psychosocial adaptation

Diagram shows the relationships between hardiness, status variables, physical function, and psychosocial adaptation.
Aim & Methods

- **Aim:** To determine the overall level of hardiness, physical function and psychosocial adaptation post stroke.

- **Design:** A quantitative cross-sectional, correlational, exploratory design was utilised in this research.

- **Data Collection:** A questionnaire package was administered to a consecutive sample of patients post ischaemic stroke (n=100) at a routine outpatient clinic in 3 Irish teaching hospitals.

- The researcher administered the following instruments a questionnaire, the Barthel Index, Modified Rankin Scale, Visual Analogue Scale (VAS) as well as other measures.
A single measure is frequently used to determine participants’ subjective rating of his/her recovery.

Respondent were asked to rate their perception of recovery since their stroke on a VAS of 0 to 100, with 0 meaning no recovery and 100 meaning full recovery.
PART D: Hardiness

Below are statements about life that people often feel differently about. Please show how much you think each one is true. Please indicate the response that most describes your opinion putting a check mark (□) in the one box for each statement.

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Not true at all</th>
<th>A little true</th>
<th>Quite true</th>
<th>Completely true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Most of my life gets spent doing things that are meaningful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>By working hard you can nearly always achieve your goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I don’t like to make changes in my regular activities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I feel that my life is somewhat empty of meaning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Changes in routine are interesting to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>How things go in my life depends on my own actions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I really look forward to my work activities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example of questions in PAIS

1. Which of the following statements best describes your usual attitude about taking care of your health?
   ( ) I am very concerned and pay close attention to my personal health.
   ( ) Most of the time I pay attention to my health care needs.
   ( ) Usually, I try to take care of health matters but sometimes I just don’t get around to it.
   ( ) Health care is something that I just don’t worry too much about.

2. Are you still as interested in your leisure time activities and hobbies as you were prior to your illness?
   ( ) Same level of interest as previously
   ( ) Slightly less interest than before
   ( ) Significantly less interest than before
   ( ) Little or no interest remaining
Results

- Participants had a mean age of 76.05 years (range 70 to 80) and were almost equally distributed between gender, relationship status and education groups.

- 39% of participants were living alone and 61% were living with a spouse or partner or others.

- The majority of participants had a motor or communication impairment post stroke.

- Physiotherapy was the most utilized therapy (91%), followed by occupational therapy (79%).

- Only 14% (n=14) of participants received thrombolysis.
Results

Table 1: Days in hospital and days since stroke onset (n=100)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean (SD)</th>
<th>Median (IQR)</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Hospital Stay</td>
<td>21.49 (24.8)</td>
<td>12 (7-28)</td>
<td>2</td>
<td>184</td>
</tr>
<tr>
<td>Days Since Stroke Onset</td>
<td>93.27 (10.9)</td>
<td>91 (87-95)</td>
<td>74</td>
<td>128</td>
</tr>
</tbody>
</table>

Figure 1: Stroke related impairments reported by participants
Physical Function

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean (SD)</th>
<th>Median (IQR)</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barthel Index</td>
<td>18.53 (2.47)</td>
<td>20.00 (18-20)</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>Modified Rankin Scale</td>
<td>1.58 (1.14)</td>
<td>2.00 (1.00-2.75)</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

**Figure 2: Barthel Index**

**Figure 3: Modified Rankin Scale**
Respondents considered themselves to be hardy, total mean hardiness score was 28 with a standard deviation of 6.11.
Psychosocial Adaptation

Respondents considered themselves to be well adjusted, overall and within each of the dimensions, total mean PAIS was 18.42, a standard deviation of 10.5.
VAS-Self-Rated Recovery

- The median self-rated recovery was 80 with an interquartile range of 60 to 95, minimum 20 and maximum of 100.
- This indicated that participants had a moderate to good recovery, at the time of data collection.
Relationship between the variables

- Those with better physical functioning and greater hardiness had better psychosocial adaptation post stroke.

- Self-rated recovery & living arrangements also contributed to better psychosocial adaptation post stroke.
“It’s a novel based on a movie adapted from a magazine article that was inspired by a video game.”
Conclusion

• Hardiness was identified as a characteristic in promoting recovery.

• Increased knowledge about personality characteristics can improve possibilities for a more individualised rehabilitation program.

• There is a relationship between hardy personality traits and psychosocial adaptation post stroke.
Implications for Practice

• Health professionals need to understand the psychosocial as well as the psychosocial consequences post stroke so that they can assist individuals in managing their illness meaningfully.

• Identifying concepts that contribute to psychosocial adaptation post stroke allows health professionals to find ways to support stroke patients during rehabilitation.

• The personality trait of hardiness provides insight into how behaviour influences adaptation post stroke.
Recovery is a deeply personal, unique process, a way of life, an attitude, and a way of approaching challenges post stroke.
References


