Social Support and Self Efficacy's Influence on Helplessness Following an Acute Myocardial Infarction

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The Nitty Gritty

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  – No disclosures to report
  – No conflicts of interest to report
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• Employer
  – Duke University School of Nursing
Objectives

- Identify relationship between social support, self-efficacy, & helplessness
- Social support and self-efficacy’s specific impact on helplessness
- Consider future steps to decrease helplessness in AMI patients
Background & Significance

• CAD
  – 360,000 CAD deaths per year in USA
  – 790,000 AMI per year
• Associated psychological factors
  – Social support
  – Self-efficacy
  – Learned helplessness
Purpose

• Examine the relationship
  – Social support, self-efficacy, and learned helplessness
  – Targeted demographic, clinical, and psychosocial factors
Theory of Learned Helplessness

(Maier, 1976; Seligman, 1975)
Research Design

• Descriptive

• Correlational

• Cross-sectional
Sample Selection

Inclusion Criteria
• 18 years of age
• Diagnostic criteria for AMI
• Ability to speak and understand English
• AMI within 12 months of the date of data collection

Exclusion Criteria
• Failure to obtain a confirmed diagnosis of AMI
• Unable to speak and understand the English language
• A diagnosed history of psychological illness, including depression, at the time of the individual’s AMI
Research Sample

Approached for Participation  
\( N = 88 \)

- Refused  \( n = 12 \)
- Withdrew  \( n = 1 \)

Convenience Sample  \( N = 75 \)

- Academic Center  \( n = 32 \)
- Community Hospital  \( n = 43 \)
Demographics

- Age
- Gender
- Race
- Ethnicity
- Relationship Status
- Employment Status
- Highest Grade Completed
- Estimated Yearly Household Income
Clinical Characteristics

- Length of Stay
- Time since AMI
- Number of previous AMIs
- Number of Co-morbidities
- CK-MB & Troponin level
## Instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Description</th>
<th>Reported Alpha</th>
<th>Alpha in this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learned Helplessness Scale</td>
<td>20-item 4-point Likert Scale</td>
<td>.71-.94 (Flynn, 1997; Quinless, 1988; Wilson, 1993)</td>
<td>.95</td>
</tr>
<tr>
<td>Multidimensional Scale of Perceived Social Support</td>
<td>12-item 7-point Likert Scale</td>
<td>.85-.88 (Chou, 2000; Zimet et al., 1988)</td>
<td>.93</td>
</tr>
<tr>
<td>Cardiac Self Efficacy Scale</td>
<td>13-item 5 point Likert Scale</td>
<td>.80-.90 (Sarka, 2007; Sullivan, 1998)</td>
<td>.93</td>
</tr>
</tbody>
</table>
Results

• Descriptive statistics
  – Predominately married Caucasian males
  – 58.8 years old
  – High school educated
  – Employed
  – $40,000 or less
Correlations with Learned Helplessness

<table>
<thead>
<tr>
<th>Variables</th>
<th>LHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>-.17 (.155)</td>
</tr>
<tr>
<td>Gender</td>
<td>-.12 (.302)</td>
</tr>
<tr>
<td>Education</td>
<td>-.34 (.003)</td>
</tr>
<tr>
<td>Comorbidities</td>
<td>.13 (.280)</td>
</tr>
<tr>
<td>One Previous AMI</td>
<td>-.14 (.230)</td>
</tr>
<tr>
<td>Two Previous AMI</td>
<td>.23 (.049)</td>
</tr>
<tr>
<td>Greater Than Two Previous AMI</td>
<td>-.13 (.265)</td>
</tr>
<tr>
<td>Disability Status</td>
<td>.22 (.055)</td>
</tr>
<tr>
<td>Estimated Yearly Household Income</td>
<td>-.44 (&lt;.001)</td>
</tr>
<tr>
<td>MSPSS</td>
<td>-.48 (&lt;.001)</td>
</tr>
<tr>
<td>CSE</td>
<td>-.61 (&lt;.001)</td>
</tr>
</tbody>
</table>
Hierarchical Regression- Step 1

**Age**
\[ \beta = -0.17, \ p = 0.121 \]

**Disability Status**
\[ \beta = 0.05, \ p = 0.697 \]

**Estimated Income**
\[ \beta = -0.44, \ p < 0.001 \]

Multiple R = 0.48  
F = 7.15  \(df=3, 71\)  
\(p < 0.001\)  
Adjusted \(R^2 = 0.20\)  
\(R^2\) change = 0.23,  
\(p < 0.001\)  

~20% variance
Hierarchical Regression - Step 2

Age
\[ \beta = -0.18, p = 0.098 \]

Disability Status
\[ \beta = 0.05, p = 0.653 \]

Estimated Income
\[ \beta = -0.40, p = 0.001 \]

AMI ≤ 2
\[ \beta = 0.09, p = 0.390 \]

AMI > 2
\[ \beta = -0.16, p = 0.133 \]

Co-morbid Factors
\[ \beta = 0.06, p = 0.625 \]

Learned Helplessness
Multiple R = 0.52
\[ F = 4.276, df = 3, 68, p = 0.280 \]
Adjusted \( R^2 \) = 0.28
\[ R^2 \text{ change} = 0.04, p = 0.01 \]

~21% variance
Hierarchical Regression - Step 3

Age
$\beta = -0.049, p = 0.633$

Disability Status
$\beta = 0.01, p = 0.859$

Estimated Income
$\beta = -0.16, p = 0.146$

AMI ≤ 2
$\beta = 0.10, p = 0.283$

AMI > 2
$\beta = -0.13, p = 0.156$

Co-morbid Factors
$\beta = -0.06, p = 0.539$

MSPSS
$\beta = -0.21, p = 0.055$

CSE
$\beta = -0.39, p = 0.001$

Multiple $R = 0.69$
$F = 12.84 \ df=8, 66$

Adjusted $R^2 = 0.41$

$R^2$ change = 0.20,
$p < 0.001$

~41% variance
Discussion

• Benefit to ameliorating learned helplessness in AMI patients
• Role played by social support
  – How to impact this concept
• Role played by self-efficacy
  – How to impact this concept
Conclusion

- Social support and self-efficacy are correlated with learned helplessness in patients post AMI
- Attention placed at discharge in identifying social support system prior to discharge
- Help patients develop an empowerment plan to combat self-efficacy
Questions??

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