



Lack of Perceived Social Support in Patients with Ischemic Heart Disease is Associated with Hopelessness



Emma Boven²; Madison P. Buursma¹; Nathan L. Tintle²; Holli A. DeVon³; Susan L. Dunn¹

¹College of Nursing, University of Illinois at Chicago, Chicago, IL 60612;

²Department of Statistics, Dordt University, Sioux Center, IA 51250;

³University of California, School of Nursing, Los Angeles, CA 90095

Abstract

To evaluate perceived social support (PSS) in ischemic heart disease (IHD) patients who report hopelessness. Using a cross-sectional design, 156 patients were screened during their hospitalization for moderate to severe state hopelessness. Twenty patients who reported hopelessness during hospitalization and maintained hopelessness one week after hospital discharge were included. A moderately strong negative correlation was identified between PSS and state hopelessness ($r=-0.54$, $p=0.014$). PSS was significantly higher in married/partnered patients (26.7 ± 4.85) compared to unmarried/unpartnered patients (18 ± 9.18 ; $t=2.45$, $p=0.035$). Social support may help reduce hopelessness in vulnerable cardiac patients, especially those who are unpartnered.

Introduction

- **Hopelessness**
 - **Definition:** A negative outlook and sense of helplessness about the future
 - Can persist in patients with IHD for up to 12 months after hospital discharge and is associated with poorer physical functioning and exercise adherence
 - Can be expressed as a chronic outlook (trait) or a temporary response to an event (state). Differentiating between the two is important, as state hopelessness may be more responsive to short-term interventions
- **Perceived social support (PSS)**
 - **Definition:** The appraisal that individuals have fulfilling relationships with people who value and care for them and are available to them
 - Identified as more important for health and adjustment than the actual receipt of social support
 - In IHD patients, PSS is associated with increased exercise adherence, IHD prevention, and improved prognosis
- Knowledge of the association between PSS and hopelessness in patients with IHD is needed to identify those at risk for poor outcomes and to assist clinicians in providing targeted interventions
- **Purpose:** To evaluate PSS in patients with IHD who report moderate to severe state hopelessness one week after hospitalization for an IHD event
- **Hypothesis:** PSS is negatively correlated with state hopelessness
- The stress-buffering model of social support was used to guide this study

Methods and Materials

- A descriptive cross-sectional design
- Participants were recruited from a large teaching hospital in the Midwest
- Inclusion criteria were:
 - A diagnosis of myocardial infarction or unstable angina or having undergone a percutaneous coronary intervention or coronary artery bypass surgery
 - ≥ 18 years old
 - Planned discharge home
 - Ability to speak and read English
 - Cognitive and physical ability to complete study measures
 - A moderate to severe level of state hopelessness
- 20 patients who maintained moderate to severe hopelessness levels one week after hospital discharge were included
- Measures:
 - Demographic characteristics
 - Clinical history
 - State and trait hopelessness
 - Depression (PHQ-9)
 - PSS (ESSI)
- SPSS 24.0 was used for data entry and RStudio was used for data analysis
- Significance was set at $p=0.05$. Statistical significance was assessed using both asymptotic and resampling methods due to the small sample size ($n=20$). The permutation tests were all generally consistent with the asymptotic tests
- An independent t-test was used to determine the difference in levels of PSS between married/partnered patients and not married/partnered patients

| Instrument | Description | Measure | Cronbach's alpha |
|---|---|---|----------------------------|
| Hopelessness | 23-items (10 state, 13 trait); Score (State & Trait): average of responses for respective subscale | 4-point Likert scale; Range: 1 to 4 | State: 0.81 Trait: 0.79 |
| Patient Health Questionnaire-9 (PHQ-9) | 9-items; Score: sum of responses | 4-point Likert scale; 0.76 Range: 0 to 27 | |
| ENRICHD Social Support Inventory (ESSI) | 7-items (PSS); Score: sum of responses from first 6 questions + question 7 | 6 questions use a 5-point Likert scale; Question 7: yes/no Range: 8 to 34 | 0.92 |

Results

| Characteristic | % (n) |
|--|----------------------------|
| Race | |
| White | 85% (n=17) |
| Non-White | 15% (n=3) |
| Sex | |
| Male | 70% (n=14) |
| Female | 30% (n=6) |
| Employment | |
| Employed | 40% (n=8) |
| Not Employed | 60% (n=12) |
| Marital Status | |
| Married | 45% (n=9) |
| Not Married | 55% (n=11) |
| Prior diagnosis for depression | |
| Yes | 50% (n=10) |
| No | 50% (n=10) |
| Prior diagnosis for heart condition | |
| Yes | 50% (n=10) |
| No | 50% (n=10) |
| Mean (SD) | |
| Age | 56.65 (13.17) |
| Hopelessness | |
| State | 2.27 (0.36) |
| Trait | 2.02 (0.29) |
| PSS | |
| Married/Partnered | 26.4 (8.60) |
| Not Married/Partnered | 26.7 (4.85) 18.0 (9.18) |
| Depression | 8.00 (5.01) |
| Correlation with PSS | r (p) |
| Hopelessness | |
| State | -0.54 (0.014) |
| Trait | -0.42 (0.068) |
| Depression | -0.50 (0.025) |

Discussion

- Our hypothesis that state hopelessness and PSS were negatively correlated was supported
- The significantly lower PSS levels in non-married/partnered patients highlights the need for nurses to assess marital/partner status of patients who report hopelessness and to encourage other networks of social support if needed
- Although cause and effect cannot be determined in this cross-sectional design, findings suggest PSS could buffer the stressful appraisal of an IHD event and reduce hopelessness
- Patients with IHD should be assessed for both hopelessness and depression during their recovery, since early interventions may reduce adverse outcomes
- IHD patients who report hopelessness and low PSS should be encouraged to seek social support through their existing social network or to join an outpatient or community group, such as a cardiac rehabilitation program or community center
- **Limitations:** only patients from a Midwestern hospital, small sample size, further exploration of potential mediating and moderating effects of other patient characteristics

Conclusion

This pilot study provides preliminary evidence of a relationship between PSS and hopelessness and depression in patients who report moderate to severe state hopelessness following an IHD event. These data provide strong rationale for further research in a large heterogeneous sample.