Depressive Symptoms After a Myocardial Infarction and Self-care

Mary Kathleen Coyle

This descriptive study examined depressive symptoms impacting the performance of self-care behaviors in patients ($N = 62$) who have experienced a myocardial infarction (MI). Having had a prior MI is inversely associated with decreased self-care behaviors at 30 days. Depressive symptoms of agitation and loss of energy significantly impacted self-care performance 30 days after discharge from the hospital. A variance of 21% ($P < .05$) in patients who experienced a prior MI and exhibited depressive symptoms of agitation and loss of energy at 30 days suggests patient vulnerability after discharge and a window for therapeutic interventions.
© 2012 Elsevier Inc. All rights reserved.

THE PURPOSE OF this article is to describe the relationship between depressive symptoms and self-care behaviors in older patients who have experienced a myocardial infarction (MI; Coyle, 2008). Knowing how depressive symptoms relate to self-care behaviors provides a therapeutic window for advanced practice nurses to target specific depressive symptoms.

After an MI, there often is a progression of coronary artery disease, including reinfarction and congestive heart failure, within the first 6 months (American Heart Association, 2009). Minimizing complications after MI is a goal of nursing; patient performance of self-care behaviors aids in attaining these health outcomes (Orem, Taylor, & Renpenning, 2001). Self-care has been linked to depressive symptoms and recovery after a cardiac event with depressive symptoms impacting morbidity (Denolett, Martens, Smith, & Burg, 2010) and suicidality (Larson, Agerbo, Christensen, Sondergaard, & Vestergaard, 2010).

Concerns have shifted from mortality toward intermediate behavioral outcomes (Fauerbach et al., 2005) to daily functioning (Judd, Schettler, & Akiskal, 2002) and self-care performance (Romanelli, Fauerback, Bush, & Ziegelstein, 2002; Ziegelstein et al., 2000). Conn, Taylor, and Wiman (1991) provided evidence that depressive symptoms are inversely related to each of the self-care behaviors (diet, exercise, adherence to medications, smoking cessation, and stress management), measured 1 to 2 years post-MI. A significant decrease in adherence to self-care behaviors in subjects from the time of hospital discharge to 30 days after an MI has been described (Miller, Wikoff, McMahon, Garrett & Ringel, 1988). Ziegelstein et al. (2000) and Romanelli et al. (2002) explored depressive symptoms using the Beck Depressive inventory at 4 months on performance of self-care behaviors. Depressive states are known to fluctuate (Lauzon et al., 2003). As such, early and continued assessment of depressive symptoms and their link to self-care behaviors may promote early detection so interventions can occur at critical times. Fauerbach et al.(2005) recommended screening for depressive symptoms when patients are

From the Chair LPN Program Berkshire Community College, Pittsfield, MA.
Corresponding author: Mary Kathleen Coyle, PhD, RN, PMHCNS-BC, Clinical Nurse Specialist, Chair LPN Program Berkshire Community College, Pittsfield, MA 01201.
E–mail address: maraceo@aol.com

hospitalized and during the transition between inpatient and outpatient settings.

DEPRESSIVE SYMPTOMS

Depression in individuals with cognitive/affective depressive symptoms such as sadness, pessimism, and loss of interest/pleasure may be recognized, but those subjects with somatic depressive symptoms are often not recognized and later demonstrate poor cardiovascular outcomes (Smoldelren et al., 2009). Underrecognized depressive symptoms may be associated with the common cardiac symptoms experienced after an MI (Mendes de Leon et al., 2005). Somatic depressive symptoms are associated with mortality (Martens, Hoen, Mittelhaueuser, deJonge & Denollet, 2010; Smoldelren et al., 2009), and fatigue, loss of energy, and sleep impairments have been linked to a higher risk for mortality and rehospitalization (Smoldelren et al., 2009). In addition, having had a prior MI was an independent predictor of cardiac death/recurrent MI (Martens et al., 2010).

The purpose of this secondary analysis is to determine if specific depressive symptoms impact self-care. The primary study focused on measuring total depressive symptom scores on the Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996) impacting self-care at 2 weeks and 30 days after an MI (Coyle, 2009). Depressive symptoms are a risk factor for nonadherence to recommended cardiac treatment, so determining the presence of depressive symptoms leads to timely interventions (Fauerbach et al., 2005). The research hypothesis was controlling for age, current depression being treated, and prior MI; an inverse relationship exists between specific depressive symptoms and self-care behavior after an MI. Permission to conduct the study was received from the institutional review boards of a university and the clinical site.

DESIGN, SETTING, AND SAMPLE

A descriptive correlational design examined the relationship between the independent variable of depressive symptoms and the dependent variable of self-care. Data were collected from 62 patients in one hospital, who were recovering from an MI in the metropolitan Washington, DC, area. Subject inclusion criteria included patients (a) who were hospitalized with a diagnosis of MI as documented by a physician in progress notes 1 to 2 days after admission, (b) who were adults older than 18 years, (c) able to speak and understand English, (d) able to participate, and (e) were alert and oriented as determined by staff nurses' daily assessment.

MEASURES

Medical and Demographic Characteristics Questionnaire

The Medical and Demographic Characteristics Questionnaire described subjects' sociodemographic characteristics and cardiac risk factors. In addition, current depression treated for at least 2 weeks and the type of treatment (psychotherapy, antidepressants, and/or mood-stabilizing drugs) by a licensed health care provider and having experienced a prior MI were determined from a review of the subjects' medical record.

Beck Depression Inventory II

Depressive symptoms were measured using the BDI-II, a well-validated, 21-item scale designed to measure self-reported depressive symptomatology (Beck et al., 1996). Each item on the BDI-II is rated on a 0–3 scale, with a total score ranging from 0 to 63. Scores of 0–9 are considered to be in the minimum range; scores of 10–16 indicate mild depressive symptoms; scores of 17–29 indicate moderate depressive symptoms; and scores of 30–63 indicate severe depressive symptoms (Beck et al., 1996). Internal-consistency estimates coefficient alpha of the total scores were .92 for psychiatric outpatients and .93 for college students. Construct validity was .93 ($P < .001$) when correlated with the BDI-II. In this study, the BDI-II Cronbach's alpha was .68 at baseline.

Health Behavior Scale

Self-care behaviors after an MI were measured by the Health Behavior Scale (HBS), developed specifically for measuring the extent to which persons with cardiac disease perform prescribed self-care behaviors (Miller, Wikoff, McMahon, Garrett & Johnson, 1982). This self-report, a 20-item instrument, assesses the degree to which patients perform five types of prescribed self-care (following diet, limiting smoking, performing activities, taking medications, and changing responses to stressful situations). Subjects responded to 20 statements on a 5-point Likert scale ranging from 1 = *unlikely* to 5 = *likely*. The statements also