



Scientia Psychiatrica

Journal Homepage: www.scientiapsychiatrica.com

eISSN (Online): 2715-9736

Approach of Care among Depression Patients with Coronary Artery Disease: A Literature Review

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ARTICLE INFO

Keywords:

Coronary artery disease
Depression
Psychiatric

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The author has reviewed and approved the final version of the manuscript.

<https://doi.org/10.37275/scipsy.v4i2.115>

ABSTRACT

Patients with coronary artery disease (CAD) frequently experience psychiatric morbidity, such as depression. It's still unknown how pre-existing depression affects mortality in people with coronary artery disease (CAD). The study's overall goal was to discover depression among patients with coronary artery disease. The detection of psychological problems (depression) in individuals with CAD has been proven to improve prognosis and quality of life. Patients who are being treated for depression or anxiety may be more likely to stick to risk factor reduction, recommended medications, and rehabilitation programs. As a result, patients with known CAD and psychiatric illnesses should be assessed.

1. Introduction

For many years, coronary artery disease (CAD) has been the leading cause of death worldwide. Around 350 million people worldwide suffer from depression, which is expected to be the main cause of illness burden by 2030.¹ Patients' experiences with CAD and the possibility of acute cardiac episodes can be stressful. Furthermore, clinicians may face a number of difficulties in appropriately detecting underlying depression. Understanding the symptoms of depression and questioning the patient about their medical history are critical. As we can see on Table 1 lists the symptoms that can be a sign of depression, as well as the diagnostic criteria for major depression²

Depression symptoms in CAD patients can be difficult to distinguish because they are also signs of heart disease. Fatigue and insomnia, for example, are

common in individuals who have been hospitalized for a heart issue and may not usually imply depression.² In order to differentiate the differences, there are some criteria for major depression that we need to know drifted in Table 1.

2. Methods

We conducted a literature search on July 2021. The criteria of search are journals published from the year 2015 until 2021 that is related to the title of this literature review, "Approach of Care among Depression Patients with Coronary Artery Disease: A Literature Review". Keywords Depression, Coronary Artery Disease, and Psychiatric are also considered and used. We limit the search to 26 journals. The 26 journals are read thoroughly to obtain a better understanding.

Table 1. Criteria for major depression.²

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To diagnose major depression, the patient must have one of the boldfaced symptoms. Five or more of these nine symptoms must have been present most of the day for more than 2 weeks:	
<ul style="list-style-type: none"> • depressed mood • diminished interest or pleasure in all, or almost all activities • low self-esteem • sleep disturbance • changes in appetite • loss of energy • difficulty with concentration • psychomotor retardation or agitation • suicidal ideation 	

3. Discussion

Noncommunicable diseases (NCDs) are a major public health concern around the world. They are responsible for 70% of all deaths worldwide. Low- and middle-income nations account for over three-quarters of all NCD mortality and 82 percent of the 16 million people who died prematurely or before reaching the age of 70th.³ Cardiovascular disease (CVD) is the greatest cause of death worldwide among all NCDs.⁴ Depression and anxiety are major psychiatric

morbidities among CHD patients. According to one study, 32.5 percent and 17.5 percent of CHD patients suffer from depression and anxiety symptoms, respectively.⁴

The majority of research found that depression is a significant factor in increasing cardiovascular events, readmission to the hospital, and CHD death.⁵ Physical and psychiatric morbidity coexisting has a deleterious impact on the course and outcome of both disorders, resulting in a higher overall disease burden.⁶

Table 2. Features of some depression screening tools.¹⁶

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	Description	Symptoms assessed	Benefits	Limitations
Beck's Depression Inventory	21-item self-reported questionnaire used to evaluate depression in normal and psychiatric populations	Key symptoms of depression including mood, pessimism, sense of failure, self-dissatisfaction, guilt, loss of appetite	Comprehensive. Completed by patient in 5-10 minutes	Does not screen for suicidal or homicidal thoughts or substance abuse
Hamilton Depression Rating Scale	An assessment of 17 to 29 areas. Designed to rate the severity of depression by addressing mood, feelings of guilt, suicide ideation, insomnia, agitation, anxiety, weight loss, and somatic symptoms.	Includes evaluation of mood, anxiety, sexual function, appetite, sleep, functional status, cognitive function, physical symptoms, hypochondriasis, general psychiatric distress	Historically, identified as the gold standard for evaluating depression	Takes more time to administer than other tools
Patient Health Questionnaire (PHQ-9)	A series of 10 questions rating over the past 2 weeks how often the patient has been bothered by situations that could indicate depression	Assesses for loss of interest, mood, sleeping difficulty, fatigue, loss of appetite or overeating, trouble concentrating	Completed by patient in a few minutes	PHQ-9 that is not modified only screens for depression and not suicide
Cross Cutting Level I of DSM-5	A self- or informant-rated measure that assesses mental health domains across psychiatric diagnoses.	Symptom severity over a 2-week period using a 4-point scale. Evaluates for depressive symptoms, suicide, and substance abuse	Helps clinicians identify areas important for treatment and diagnosis and can be used to track changes in symptoms over time	Due to comprehensive nature of assessment, may take more time for patient to complete.

Psychiatric problems with depression must be identified earlier and well-known in order to improve the prognosis and quality of life in CAD patients. Patients who are being treated for depression or anxiety may be more likely to stick to risk factor reduction, recommended medications, and rehabilitation programs. As a result, patients with

known CAD and psychiatric illnesses should be assessed and treated well.⁷

Psychiatric symptoms, such as depression or anxiety, were reported by 95.4 percent of individuals with ischemic heart disease (IHD). Anxiety disorder was detected in 36.9% of patients, and major depressive disorder was found in 34.6 percent. The

majority of patients with poor quality of life suffer from anxiety or sadness.⁸ Anxiety and depression were found in 48.5 percent and 25.2 percent of myocardial infarction patients, respectively (MI). In individuals with CAD, a high or growing level of worry that lasts for a long time is linked to an increased risk of MI and death.⁹

Depressed people are less likely to follow healthy practices. Thus, they have more of these risk factors than people who aren't depressed. Nonadherence, which includes incorrect drug usage, failing to follow a prescribed diet or exercise program, and failing to see a doctor on a regular basis, are all behavioral hazards that can contribute to the development and worsening of CAD. Depression has been linked to poor medication adherence, with poor adherence having the worst prognosis for cardiovascular health. Depression in CAD patients is linked to a number of variables.¹⁰ A study of 108 CHD patients in a Malaysian tertiary hospital found that patients with CHD exhibited low levels of anxiety and depression. Unmarried respondents with comorbid disease experience more anxiety and depression than married and non-comorbid disease respondents.¹¹

The Beck depression inventory (BDI), the Hamilton depression rating scale (HAM-D), and the patient health questionnaire are three of the most commonly used measures for assessing patients for depression (PHQ-9).¹² The cross-cutting level I of the diagnostic and statistical manual of mental disorders (DSM-5) is a comprehensive assessment tool that is becoming more commonly used. In Indonesia, we often use DSM screening tools for diagnosing patients with depression. Because depression has so many comorbidities that contribute to poor outcomes in patients with CAD, employing screening methods to detect risk factors is critical in diagnosing depression in these patients.¹²

Some studies have found that screening for depression does not always reduce morbidity and death in CAD patients. Patients with CAD who have had an acute MI had a 70 percent to 90 percent greater risk of death one year after the MI if they have been

diagnosed with depression but not treated. According to a recent analysis of data from the TRIUMPH research. Identifying these patients and providing appropriate management can help to reduce morbidity and mortality.¹⁶

Some studies have found that screening for depression does not always reduce morbidity and death in CAD patients. Patients with CAD who have had an acute MI had a 70 percent to 90 percent greater risk of death one year after the MI if they have been diagnosed with depression but not treated, according to a recent analysis of data from the TRIUMPH research. Identifying these patients and providing appropriate management can help to reduce morbidity and mortality.²

Depending on the clinical or hospital situation, each assessment instrument has advantages and disadvantages. Question 9 of the PHQ-9 tool shows a high level of reliability for suicidal ideation. In addition, the PHQ-9 can be applied in a therapeutic context in a short period of time.¹³ The BDI, on the other hand, can be utilized in the clinic; nevertheless, it is longer than the PHQ-9. Because of this, the BDI might be best served in a clinical research setting than in primary care.¹⁴ For many years, the HAM-D has been considered the gold standard for measuring depression in a therapeutic setting. However, some argue that because it focuses on sleeplessness rather than other areas, it may be limited in its ability to serve as a definitive instrument for assessing depression.¹⁵

When we compared it to the PHQ-9, the HAM-D takes longer to administer, similar to the BDI. The DSM-5 Cross-cutting level I has many advantages for evaluating depression in CAD patients. Screening for suicide and substance abuse is included in this tool.¹⁸ As discussed earlier, Patients with depression and coronary artery disease are more likely to develop these diseases. Therefore detecting them is crucial for treatment. All individuals should be screened for depression, and depression should be treated with medication and psychotherapy, according to the US Preventive Services Taskforce (USPSTF).¹⁹ When paired with medication, psychotherapy is more

successful in the treatment of mental illnesses and disorders. CBT, IPT, problem-solving depression care, and supportive stress management are all types of psychotherapy (Figure 1). Psychotherapy is provided by psychologists and professionally trained social workers. The ENRICHD (Enhancing Recovery in Coronary Heart Disease) trial proved the value of combining psychotherapy with antidepressants.^{19,20}

CBT's goal is to change behavior and thought. Meanwhile, IPT's goal is to help patients deal with relationship difficulties caused by depression. Problem-solving depression care aims to improve interactions in difficult social situations. Supportive stress management exists to help patients handle the challenges after a cardiac event.²⁰

Combining Psychotherapy and pharmacologic management can be an effective regimen that is appropriate for depression that is severe, chronic, or does not improve with only pharmacologic therapy.

Patients with cardiac disease, cardiac events, and psychiatric diagnoses have responded well to support stress management. Like CBT, supportive stress management is weekly and includes follow-up phone calls. Stress management teaches coping skills through scenarios and observation. The psychologist, clinically trained social worker, or mental health professional then gives the patient-guided steps on how to relax during stressful times.²¹

Problem-solving tactics were also employed in the ENRICHD experiment to prepare patients for tough times and thoughts after MI. After six months, the problem-solving counseling sessions enhanced the social skills, self-esteem, and contentment of each patient. The therapy groups also included group sessions to allow patients to share their low perceptions of social support while also enabling them to take action.²²

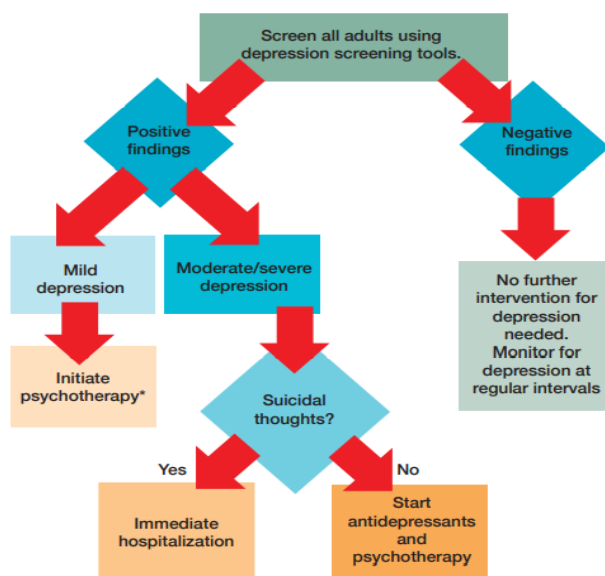


Figure 1. Algorithm for screening adults and treating those with depression (based on USPSTF recommendations)^{23,24,25} * Initiate psychotherapy consists of CBT, IPT, problem solving, and support.

4. Conclusion

There is a well-established relationship between depressed symptomatology, coronary heart disease (CHD), and related mortality and morbidity. However, drawing conclusions is challenging because the impact of pre-existing depression on mortality in those with established CAD is unknown. However, several

researchers have demonstrated that coronary artery disease and depression are both common disorders. Both of them cause a significant decrease in the quality of life for the patient and impose a significant economic burden on society. Depression has a great correlation with CAD patients. So then, in the next study, psychiatry visits by specialties along with

assessment by nurses in cardiovascular patients are recommended for case finding and depression experiments.

These findings should be further investigated and validated through additional studies. Clinicians in multidisciplinary patient care settings play a vital role in the evaluation, diagnosis, and treatment of depression in patients with CAD. Symptoms of depression can be challenging to detect in the clinical setting, so the first step to caring for these patients should be to develop an understanding of how to use depression screening tools. Once depression is diagnosed in a patient with CAD, the next steps are identifying and implementing appropriate interventions. Identifying the appropriate treatment for patients with depression and CAD can make a tremendous difference in the course of cardiac recovery and improve adherence to medical recommendations.

Combining Psychotherapy and pharmacologic management can be an effective regimen that is appropriate for depression that is severe, chronic, or does not improve with only pharmacologic therapy. One of the accomplishments of our management is to make the best decision for identifying the diagnosis and the right therapy of the disease in the right person so that patients' remission from our treatment could increase their quality of life and impose a significant economic burden on society.

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