

DEVELOPMENT OF A LEARNING MODULE FOR NURSES: PRE-DISCHARGE
ASSESSMENT OF PSYCHOLOGICAL DISTRESS IN HOSPITALIZED PATIENTS WITH
CARDIOVASCULAR DISEASE

By

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Abstract

Background: Psychological distress is common among patients with cardiovascular disease (CVD). This can lead to significant cardiac risk and, ultimately, increased rates of morbidity and mortality. Clinical practice guidelines recommend that routine screening for psychological distress should occur following any cardiac event. With this practice change, nurses are expected to perform such mood assessments using an appropriate screening tool.

Aims: To identify, review and synthesize the relevant literature in order to develop an online, self-directed learning module for nurses that outlines 1) the evidence for the association between CVD and psychological distress and 2) how to effectively conduct the psychological-distress screening with all CVD inpatients.

Methods: The literature was reviewed with a focus on three key points: the important links between psychological distress and CVD; the best practices for psychological screening among CVD patients; and the evidence for the benefits of psychological distress screening. A literature search was also done on adult learning principles, knowledge translation, and learning module development. Using all of this information, a self-directed online learning module was developed.

Recommendations: Nurses, as adult learners, must take an active role in learning how to effectively screen cardiac patients for psychological distress. This module offers background evidence, relevant case scenarios, and self-evaluation questions to promote optimal learning.

Conclusion: The opportunity to screen patients with CVD for psychological distress is one that must not be missed. Nurses play a pivotal role in the screening process, since/because the nurse-patient relationship is an important determinant of patients' perceived benefits of a healthier lifestyle after a major cardiac event. With practice changes regularly occurring in the nursing

profession, it is imperative that nurses take an active role in such educational opportunities such as this learning module regarding screening patients with CVD for psychological distress.

Keywords: cardiovascular disease, psychological distress, screening, adult learning, inpatient, nursing.

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Chapter 1: Introduction

The term cardiovascular disease (CVD) encompasses all disorders of the heart and blood vessels, including coronary heart disease, cerebrovascular disease, rheumatic heart disease, and congenital heart disease (World Health Organization, 2017). The prevalence of CVD is on the rise in both developed and developing countries around the world (Ghaemmohamadi et al., 2018). The World Health Organization estimates that 17.9 million people die each year from CVD, which equates to 31% of all deaths worldwide. It is said to be one of the main challenges that all health systems are faced with today.

Historically, the risk factors for CVD have been listed as age, sex, family history of CVD, smoking, hypertension, diabetes, high cholesterol levels, obesity, and physical inactivity (Elderon & Whooley, 2013). However, in the last few decades, studies have found that psychosocial factors play an important role in predicting both morbidity and mortality of people with CVD (Elderon & Whooley, 2013). There are several types of psychological distress which include depression, anxiety, stress, anger, and low social support (Young et al., 2015). Psychological distress is defined as “a unique discomfoting, emotional state experienced by an individual in response to a specific stressor or demand that results in harm, either temporary or permanent, to the person” (Ridner, 2004, p. 539).

Depression is known to be the most common mental illness in the world and it can significantly impair the personal, social, and family activities of those affected (Ghaemmohamadi et al., 2018). Common features of depression include chronic feelings of sadness, emptiness, or irritability as well as somatic and cognitive changes that significantly affect the individual’s ability to function in daily life (Franzon et al., 2018). The risk of experiencing a mood or anxiety disorder such as depression is two to three times higher in

patients with a chronic degenerative disease such as CVD (Ghaemmohamadi et al., 2018). Furthermore, the presence of depressive symptoms is associated with an overall higher risk of mortality and an overall poorer prognosis for those with CVD (Franzon et al., 2018). Depression predicts CVD incidence and severity through multiple potential biological and behavioural mediators (Elderon & Whooley, 2013). These include factors such as smoking, physical inactivity, medication nonadherence, lower heart rate variability, toxicity from antidepressants, greater catecholamine levels, poor diet, lower omega-3 fatty acid levels, platelet activation, and inflammatory processes.

Depression can be highly correlated with other types of psychological distress such as anxiety (Lichtman et al., 2008). Anxiety has been identified as an independent risk factor in patients with CVD (Roest et al., 2010). It has been associated with progression of atherosclerosis, decreased variability in heart rate, and increased risk of ventricular arrhythmias. The prevalence of anxiety varies from 10% - 60% in patients with CVD and its symptoms are known to worsen when patients are admitted to hospital (Daniel et al., 2018). Despite the high prevalence and adverse outcomes, these mood and stress symptoms are frequently ignored and left untreated in hospital.

The strong association between CVD and psychological distress highlights the importance of early detection and awareness through screening (Elderon & Whooley, 2013). Clinical practice guidelines recommend routine screening for depression and anxiety following any cardiac event (Lichtman et al., 2008). The gold standard to diagnose a depressive episode is with a structured clinical interview to assess the extent to which the patient meets the criteria outlined in the Diagnostic and Statistical Manual (Elderon & Whooley, 2013). However, due to many factors, it is seen as impractical to conduct such an interview with all CVD inpatients.

Therefore, several shorter, validated screening tools have been introduced to assess for depressive symptoms.

However, although there are various screening tools available, cardiac inpatient units are faced with barriers to implementing these tools such as the cost per use, the time-consuming process, and the expectation of professional interpretation of the results (Young et al., 2015). An ideal screening tool for cardiac inpatient units therefore must be brief, cost-effective, and not overly tedious for the staff to complete in addition to their other tasks. Some of the validated screening tools, however, do not meet these unique requirements. Yet without these specific assessments using formal screening tools, psychological distress is commonly left unrecognized and untreated by health care professionals (Ziegelstein et al., 2005). Faced with such obstacles, most cardiac programs do not offer routine screening of inpatients for psychological distress, despite best practice guidelines.

My interest in this topic originates from my work experience in cardiology. I worked as a staff nurse on a cardiology unit for four years and I recall many patients with CVD exhibited signs and symptoms of psychological distress while in hospital. There were no education or screening tools available to my nursing team to prepare us for the discussion of such a sensitive subject with our patients or to identify patients at risk using a valid tool. The inpatient cardiology unit at St. Paul's Hospital has introduced the Screening Tool for Psychological Distress (STOP-D) into practice. The original tool is a five-item questionnaire that provides severity scores for each of the common psychosocial risk factors (Young et al., 2015). However, this implementation uses only two items from the tool: those for depression and anxiety. The STOP-D tool can be used at no cost, completed by patients quickly, and requires no interpretation and scoring. As part of its implementation, education of the nursing staff to conduct the screening

process effectively is required, from helpful conversation prompts, to how to discuss the results with the patient, to transmitting the information to the primary care provider. Although there are currently assigned nurse champions on the unit, education of any newly hired staff will be an ongoing necessity.

Problem Statement

Since the St. Paul's Hospital cardiology inpatient unit has introduced the STOP-D screening tool to identify psychological distress in CVD patients, the unit must ensure that any new nursing staff receive education regarding the screening process. Although this screening tool requires no scoring and interpretation, it is important that nursing staff are aware of why this has been incorporated into their practice and how to effectively carry out the screening process.

Purpose Statement

The aim of this Scholarly Practice Advancement Research Project (SPAR) was to identify, review and synthesize the relevant literature in order to develop an online, self-directed learning module. The module outlines the theory behind the association between CVD and psychological distress as well as how to effectively conduct the psychological distress screening with all CVD inpatients. It will be directed towards new nursing staff orientating to the inpatient cardiac units. The learning module must be easily accessible by the nursing staff during their orientation and it should take no longer than 30 minutes for the staff to complete. This module will include background theory as well as instruction for nurses on how to use the tool and approach this sensitive topic with their patients.

Significance

This master's project will be significant to the nursing staff of St. Paul's Hospital inpatient cardiology unit. With any change to nursing practice, it is important that nurses know

why it is necessary for patient care. Thus, the knowledge gained from this SPAR may help the new staff to become clear on their role, to effectively conduct screening for psychological distress with their patients, and to introduce them to the process and resources available for their patients. It will also be beneficial to the Nurse Educators who will be able to use the self-directed learning module for each orientation to ensure that all nursing staff are receiving the same education regarding the screening tool. There is also the possibility that this practice change will soon be introduced to the inpatient Cardiac Surgery unit at St. Paul's Hospital. If this occurs, the learning module will be useful to familiarize all of the staff to the change in practice and the STOP-D screening process. Finally, this SPAR aims to help make the screening process for psychological distress more effective and comfortable for nursing staff.

Chapter 2: Review of Literature

This chapter is a review of the literature with regards to CVD and psychological distress. The important linkage between CVD and psychological distress is first discussed followed by the best practice recommendations. Next, the importance of screening for psychological distress in patients with CVD is reviewed. The opposing view towards screening for psychological distress is also discussed. Lastly, the theory behind learning module development, knowledge translation, and adult learning theory is considered. The information obtained in this review of the literature informs the development of the learning module for new nursing to the inpatient cardiac unit.

CVD and Psychological Distress

The prevalence of CVD is on the rise in both developed and developing countries around the world (Ghaemmohamadi et al., 2018). The World Health Organization estimates that 17.9 million people die each year from CVD, which equates to 31% of all deaths worldwide. It is said to be one of the main challenges that all health systems are faced with today. In addition, psychological distress is another challenge seen in health care all over the world. It is known as the most common mental illness in today's population with severe effects on people's personal, social, and family activities (Ghaemmohamadi et al., 2018). After many decades of research, a strong association has been found between CVD and psychological distress (Elderon & Whooley, 2013).

Psychological distress is commonly present in patients with CVD and is independently associated with an increase in cardiovascular morbidity and mortality (Lichtman et al., 2008). Depressive symptoms, for example, have been shown to be roughly three times more common in patients after a myocardial infarction than in the general population. Psychological distress

confers significant risk in patients with CVD due to the association with poorer quality of life, poorer disease outcomes, and higher all-cause mortality (Palacios et al., 2017).

The health behaviours, inflammatory processes and low heart rate variability that are associated with psychological distress have been shown to also be associated with the development of CVD (Elderon & Whooley, 2013). For example, the elevated levels of certain inflammatory biomarkers such as C-reactive protein, interleukin 1 and interleukin 6 that are found in patients with depression have been associated with the development of atherosclerosis. Depressed individuals also tend to exercise less than their healthy counterparts and these lower levels of exercise have been linked to increased inflammation (Elderon & Whooley, 2013). Furthermore, anxiety has also been shown to be associated with progression of atherosclerosis, decreased variability in heart rate, and increased risk of ventricular arrhythmias (Roest et al., 2010). Beyond the pathophysiological effects, certain behaviours and social characteristics of patients with psychological distress may also contribute to the development and progression of CVD (Lichtman et al., 2008). These include factors such as diet, exercise, tobacco use, medication adherence, social isolation, and chronic life stress.

Best Practices for CVD Patients

Despite its frequency and negative impact on health, psychological distress often goes unrecognized and untreated (Young et al., 2015). The gold standard for diagnosing a major psychiatric disorder is to conduct a clinical interview during which the patient is assessed using the criteria outlined in the Diagnostic and Statistical Manual (Elderon & Whooley, 2103). After confirming a diagnosis, treatment options for psychological distress include pharmacotherapy, psychotherapies, such as cognitive behavioural therapy, and physical activity.

Lichtman et al. (2008) outline their best practice recommendations for patients with CVD who are experiencing psychological distress. As it is impractical and unrealistic to administer a full diagnostic interview with each CVD patient, routine screening is recommended in various settings such as the hospital, physician's office, clinic, or cardiac rehabilitation centre. They stress that the opportunity to screen patients should not be missed, for treatment may improve overall health outcomes. Secondly, patients with positive screening results should be further evaluated by a professional qualified in the diagnosis and management of psychological distress (Lichtman et al., 2008). Lastly, CVD patients who are receiving treatment for their psychological distress should be carefully monitored, because their adherence to medical care and coordination of care between all health care providers is essential from the medical and mental diagnoses.

The Benefits of Screening

The strong association between CVD and psychological distress highlights the importance of the identification and treatment of these psychological symptoms. With psychological distress having both a direct and indirect effect on cardiac outcomes, a timely and accessible screening option is imperative (Lichtman et al., 2008). Cardiologists need to consider psychological distress in their management of CVD. "Current evidence indicates that only approximately half of cardiovascular physicians report that they treat depression in their patients, and not all patients who are recognized as depressed are treated (Lichtman et al., 2008, p. 1770). A reasonable option would be for cardiologists to refer their patients to a health care provider who is qualified in the assessment and treatment of psychological distress if they believe it necessary.

Although there are several screening tools that have been developed to screen for depression and anxiety, there are certain factors that pose barriers to the implementation of these

tools in the hospital setting (Young et al., 2015). For example, screening tools can be expensive, with per-use fees, time-consuming to complete, and may require expert interpretation. With that taken into consideration, studies have found certain screening tools are appropriate in the inpatient cardiac ward setting. The ideal screening tool for the hospital setting would be both acceptable to patients yet not overly burdensome for the nursing workload (Young et al., 2015).

Elderon and Whooley (2013) note that screening for depression should be straightforward. With various screening tools available, the 2-Item Patient Health Questionnaire (PHQ-2) is highlighted throughout the literature as one of the more widely-used screening tools. It is a simple instrument that takes less than one minute to complete. However, with its low specificity and positive predictive value, it does require a diagnostic interview for the patients who screen positive (Elderon & Whooley, 2013). An alternative, that was initially developed and validated in the outpatient cardiology setting and subsequently validated for inpatient settings, is the STOP-D screening tool (Young et al., 2015). It is a brief and cost-effective five-item questionnaire that provides severity scores for each of the common psychosocial problem areas including depression, anxiety, stress, anger, and low social support. STOP-D is free to use, can be completed by patients in approximately one minute with minimal assistance from a healthcare professional, and it requires no time for scoring or interpretation. Of note, if the screening is positive, a full clinical assessment must be completed to establish a diagnosis of psychological distress.

It is important to note that there is not full support for screening patients with CVD for depression. Ziegelstein et al. (2009) are concerned with the lack of evidence that the benefits from screening substantially outweigh potential harms. They go on to explain that bringing greater attention to the association between psychological distress and CVD is beneficial through

providing good clinical care by talking to patients. They argue that assessing patients that present with symptoms of depression through such discussion is very different from just routinely screening patients through questionnaires and surveys. Ziegelstein et al. (2009) further argue that the American Heart Association should modify their recommendation of routine screening due to the limitations of existing evidence and should rather emphasize the importance of psychological distress in patients with CVD, raise the awareness of cardiovascular care providers to the symptoms of emotional illness, and suggest the development of closer clinical relationships with mental health providers.

Adult Learning and Module Development

Andragogy

The idea that adults learn differently from younger students is well documented in the literature (Taylor & Kroth, 2009). The concept of andragogy started to emerge in the 1800s and then gained popularity between 1960 to 2000, when Malcolm Knowles began to develop the concept (Taylor & Kroth, 2009). His work gave adult education a “brand name” and new educational strategies to explore.

Zmeyov defined andragogy as the theory of adult learning that sets out the scientific fundamentals of the activities of learners and teachers in planning, realizing, evaluating, and correcting adult learning (as cited in Taylor and Kroth, 2009). Its counterpart, pedagogy, is referred to as teacher-focused education whereas andragogy is known as learner-focused education. Taylor and Kroth (2009) note that the principle of andragogy strongly emphasizes that adults should be taught differently than younger students because their learning processes are significantly different.

Knowles, a scholar who theorized about adult education through his career, summarized six key assumptions about adult learners: self-concept, experience, readiness to learn, orientation to learn, motivation to learn, and need to know (Taylor & Kroth, 2009). These assumptions are inherent in andragogy and mean that 1) adults desire more of a sense of self-directedness as they mature; 2) one's personal experiences are a rich source of learning; 3) readiness is dependent on an appreciation of the relevancy of the topic; 4) the orientation towards learning shifts from subject-centeredness to one of problem-centeredness and 5) adults are driven by an internal motivation and need to know the reason for learning something (Decelle, 2016; Taylor & Kroth, 2009). Overall, andragogy emphasizes that educational approaches should be student-centered, experienced-based, problem-oriented, and collaborative between learners and educators.

Knowledge translation

Health services, funding and policy organizations have increasingly become aware of the large gap between evidence-based research and what is done in clinical practice (Lal et al., 2015). This has resulted in the emergence of the practice of knowledge translation (KT) to bridge this knowledge-to-practice gap. Szeban defines KT as the deliberate dissemination of knowledge using an implementation strategy to ensure that the information reaches a desired population and subsequently is used current practices (as cited in Doran & Sidani, 2007). The process starts with knowledge generation and synthesis and then moves towards uptake and implementation into practice (Kitson, Phil, & Harvey, 2016). Evidence, however, repeatedly highlights the complexities of the process of KT and the multifaceted factors that determine whether and how the research-based knowledge is integrated into health care policy and practice. These factors include the negotiated and contested nature of the evidence in health care decision making, as well as the significant impact of context on the way knowledge is shared (Kitson et al, 2016).

The KT process is most beneficial with a facilitator to enable the individuals, groups and teams to work effectively together towards achieving the common goal (Kitson et al., 2016).

There are challenges specific to delivering KT interventions in all clinical disciplines (Lal et al., 2015). For example, there are often limited resources allocated towards KT with regards to funding, training, peers, infrastructure, and materials. Limited time and competing priorities often challenge working nurses to engage in the KT practices and research. Although lifelong learning and continuing competence are essential within the nursing profession, such barriers make it much more challenging for nurses to achieve (Lal et al., 2015). All of these factors must be taken into consideration when implementing a KT intervention, for example, an online learning module.

Module development

Online learning modules are a common approach for ongoing staff development in adult learners (Philips, 2005). They are becoming more popular due to their convenience and quality (Decelle, 2016). Such technology allows the user to experience new concepts, gain cognitive skills, and encounter realistic clinical situations in a no-harm environment (Stemberger, 2001). Andragogy has become a fundamental principle of online education and it has greatly affected the way adult learning is perceived (Decelle, 2016).

Instructional design is a large component in the development of an online learning module (Burns, 2011). Instructional design is a broad term used to describe the selection, organization, sequencing, and assessment of content and tools that are required in order to help learners attain a certain set of goals. Poorly designed technology-based modules can “confound learning, frustrate learners and instructors, and result in high attrition rates” (Burns, 2011, p. 138). Certain characteristics noted in the best learning designs include: clear learning goals and

performance expectations; the ability to accommodate various learning styles through a variety of activities and methods; and learning activities that are active and experiential to allow students to “construct meaning”. The learning expectations and program objectives offer a blueprint of the material so that learners can better encode information for later retrieval (Stemberger, 2001).

It is also very important that online learning links the theory with practice. Distance education is often criticized for its failure to integrate theory with practice in comparison to face-to-face instruction (Burns, 2011). Therefore, online learning modules must be designed to allow learners to apply their knowledge to practice as well as put their knowledge into action.

Chapter Three: Development of Learning Module

For the purposes of this learning module, an online delivery method was chosen. Online learning is an effective approach used in adult education for it allows learners to experience new concepts and gain cognitive skills in a convenient and no-harm environment (Phillips, 2005; Stemberger, 2001). Andragogy is a fundamental principle within adult online education that maintains that educational approaches must be student-centered, experience-based, problem-oriented, and relevant to their job or personal life (Decelle, 2016). This learning module was formatted on the basis of these concepts.

Format

Andragogy principles

The module was developed using the key concepts of andragogy as previously mentioned. Beginning with student-centered, the “students” using this module are new nursing staff to a cardiac inpatient unit and this was central to the development of the module in various aspects. This is evident in both the accessibility and efficient delivery of the module content.

Accessibility was one of the key motivators for choosing online learning. It allows for users to access content ‘anytime, anyplace’ (Burns, 2011). This type of flexibility is important during the nursing orientation as there is an abundance information that needs to be covered. In addition, having the internet accessible provides access to additional experiences and resources regarding CVD and psychological distress that would not be available in a non-networked environment and allows learners to return to the module anytime. The module will take users no longer than 30 minutes to complete. Efficiency is essential because we wanted to keep users engaged in the information and, as previously mentioned, there is a lot of other content that must be reviewed during new staff orientation.

Another aspect of the principle of student-centered includes the involvement of learners in the evaluation of their instruction (Pappas, 2013). It is our intention that nursing staff will use both self-reflection and evaluation to determine whether they have achieved the learning objectives of the module. At the end of the module, there is a slide that prompts nurses to take some time to reflect on their upcoming assessments of psychological distress in clinical practice. The nursing staff must be able to demonstrate the psychological screening process in their clinical practice as a part of their professional responsibility as nurses. Laminated copies of the step-by-step guide and the conversation cues are provided on the nursing unit to ensure that staff are able to take those with them as references when performing the assessment.

Andragogy's experience-based principle was considered in the development of the module's content. It was important that our instruction took into account the wide range of learners' backgrounds and have the content and activities allow for these different levels/types of experience (Pappas, 2013). This particular cardiac inpatient unit employs nurses from new graduate level to nurses who have been working for decades. Therefore, we expected that the learners using this module have a varied level of experience working with patients experiencing psychological distress and our content was developed with this in mind. For example, we did not provide thorough detail regarding the explanation of CVD as we assumed that our learners have this knowledge base already being that they have been hired to a cardiac unit. Andragogy's principle of experience was also considered within the module's step-by-step guide to using the STOP-D and the conversation cues guide. These were developed by the Knowledge Translation (KT) team of individuals from various backgrounds such as psychology and nursing (Clinical Nurse Specialist, Clinical Nurse Leader and staff nurses). The information was obtained through

experience with the STOP-D screening tool and its use in clinical practice. Feedback was also gathered from past patients who have been assessed using the STOP-D tool.

Andragogy's third principle emphasizes that adult learning is problem-centered over content-oriented (Pappas, 2013). We assume that the nurses hired to this cardiac unit are motivated in their life-long learning as well as their professional responsibility. The module explains the high prevalence of psychological distress and CVD as comorbidities and the large impact this has on patients and health care systems worldwide. We believe this to be a strong motivating factor for nurses to learn this content and to take an active role in screening for psychological distress in hospital. The module solves the problem of addressing questions regarding psychological distress screening as well as alleviating some of the stress involved in the screening process. Overall, the intention is that the eLearning module will be interactive in nature. Users are presented with content, asked questions to reinforce learning, and are provided with case scenarios that aim to link the theory with practice. The purpose of the case scenarios at the end of the module is to allow the nurses to hypothetically put themselves in more challenging assessment situations and see how those scenarios could play out.

Andragogy's fourth principle states that adults are most interested in learning subjects that have immediate relevance to their work or personal lives (Pappas, 2013). As a part of the clinical practice guidelines in cardiac care, learning to use the STOP-D tool and performing an assessment of psychological distress for patients with CVD is completely relevant and necessary in the nursing role. It can be stressful to broach the subject of mental health with patients for some nurses; thus, the module is available to both prepare as well as help to alleviate some of the stress around performing a psychological distress assessment.

Content of Learning Module

The learning module begins with an outline of the module goals and learning objectives. Providing the learning expectations and program objectives offers learners a blueprint of the material so that the information can be better encoded for later retrieval (Stemberger, 2001). The learning objectives are measurable so that students are able to self-evaluate whether they are able to complete the objectives listed once they finish the module. For example, “list the steps involved in the psychological screening process” is one of the objectives. The epidemiology and statistics regarding the prevalence of CVD and psychological distress are reviewed first to emphasize the importance of the issue. We wanted to stress the prevalence of CVD and psychological distress because the psychological component is often neglected and left untreated in patients with CVD (Daniel et al., 2018). This will be followed by the evidence that supports the rationale for in-patient screening of psychological distress. The American Heart Association’s clinical practice guidelines recommend routine screening for depression and anxiety regarding any cardiac event (Lichtman et al., 2008). As a large influencer in cardiology care with western medicine, the American Heart Association was a strong and reputable source to reinforce this recommendation.

Next, the STOP-D screening tool is reviewed, including the procedure for screening discussed in detail. We discussed how the tool, originally a five-item screening tool, has been edited down to a two-item tool, focusing on depression and anxiety, for the purposes of this particular KT project. A step-by-step guide is reviewed that will help learners to see what the whole process entails. There are also useful tools such as conversation cues, developed by the KT team, which will be available in the module as well as on the unit. Lastly, case scenarios are presented that aim to help users apply the knowledge they have just acquired in their practice. These scenarios will go through some of the more complex practice situations that nurses may

encounter and discuss appropriate responses. The module finishes with a summary as well as additional resources that are available to learners. These include: the unit champions, the Clinical Nurse Educator, the Clinical Nurse Leaders and the Clinical Nurse Specialist for Cardiology.

Overall, the module is intended to be engaging to participants. The content is presented in brief, point-form sentence structure to avoid losing the attention of readers with long and drawn-out sentences. Pictures of the step-by-step guide and the conversation cues are also included, in order to appeal to our visual learners. Recommendations of appropriate responses are provided so that users may assess how similar their responses are. It is our hope that the module prompts further discussion amongst the nursing staff regarding challenging assessments as well as offering both advice and support.

Module Evaluation

Evaluation of education modules is imperative to assess the domains of learning and ensure an effective learning experience (Phillips, 2005). An evaluation helps educators determine whether learners have met the outlined learning objectives described in the course and provides information about the effectiveness of teaching and learning. It is an ongoing process that starts with an assessment of learners and seeking out feedback through either a formal or informal course evaluation (Phillips, 2005).

As a hypothetical evaluation plan, feedback via an evaluation form could be obtained from the nurses after they complete the unit orientation process. Information that would be beneficial to the maintenance of this module would include information regarding what the nurses liked about the delivery, format, and content as well as what they would recommend changing. As another method of evaluation, either the Clinical Nurse Leaders or another member of the KT team could track the progress of the STOP-D questionnaire and the psychological assessments at

staff meetings. For example, as part of the agenda, the Clinical Nurse Leaders could seek out updates from their staff about how the overall process is going and if any new questions or concerns have arisen.

Chapter 4: Discussion and Conclusion

The aim of this scholarly research project was to develop an online, self-directed learning module that outlines the theory behind the association between CVD and psychological distress. The intention is that the module will guide nurses to effectively conduct psychological distress screening with all CVD inpatients. To do that, I reviewed and synthesized the relevant literature to help formulate the content of this project. Some key recommendations originated from this project, which are discussed below.

Recommendations

In both developed and developing countries around the world, the rates of CVD are on the rise (Ghaemmohamadi et al., 2018). With chronic-degenerative diseases such as CVD, the risk of experiencing psychological distress is two to three times higher than in people without a disease. The presence of these psychological symptoms predicts both incident CVD in healthy individuals as well as secondary events and adverse outcomes in patients diagnosed with CVD (Elderon & Whooley, 2013). Daniel et al. (2018) also note that patients with anxiety at the beginning of their admission for a cardiac event are more likely to develop depression later on compared to the patients without anxiety. The American Heart Association (AHA) put forth a Science Advisory that recommends that screening tests be applied to all patients with CVD in order to help identify those who may require further assessment and treatment of psychological distress (Lichtman et al., 2008). The AHA has a highly influential role in recommending practice changes and research related to cardiovascular health in Western medicine. Based on their research, the authors of this advisory believe the prevalence of CVD and the associated psychological distress is enough to call for routine screening of patients in various settings such as hospitals, physician offices, clinics, and cardiac rehabilitation centres.

The opportunity to screen patients is one that must not be missed for treatment may improve overall health outcomes (Lichtman et al., 2008). The treatment options outlined in the advisory include: antidepressant drugs, cognitive behavioural therapy, and physical activity/exercise. Antidepressant drug use has been associated with both increased and decreased cardiac risk in some studies, however, certain randomized control trials have demonstrated that two selective serotonin reuptake inhibitor antidepressants are safe for patients with CVD and effective for moderate, severe, or recurrent psychological distress. If pharmacological treatment is initiated, patients should be observed closely for the first two months and regularly thereafter in order to monitor suicidal risk, ensure medication adherence, and manage any adverse effects of the medications (Lichtman et al., 2008). Cognitive behavioural therapy is also a beneficial treatment for psychological distress in CVD patients. It may be an alternative for those who cannot tolerate antidepressants or who may prefer a nonpharmacological or counseling approach to their treatment. Lastly, aerobic exercise and cardiac rehabilitation can reduce symptoms of psychological distress in addition to improving cardiac health. The prescription of exercise, however, must be individually assessed based on cardiac status and exercise capacity of the patient (Lichtman et al., 2008).

The principles of adult learning must be taken into account when developing learning materials for nurses. Adults hold unique characteristics as learners (Decelle, 2016). The foundation behind adult learning theory is a combination of both andragogy and self-directed learning (Sanchez & Cooknell, 2017). Andragogy focuses on the basic principles of adults as learners while self-directed learning states that adults assume responsibility for their own learning through which they will achieve a deeper understanding of themselves. These precepts support the key assumptions that adults have life experiences that they use to direct and

comprehend their learning; are internally motivated and problem driven; expect that the knowledge gained will be immediately applicable; and are independent and responsible for the time, place, and method of learning (Sanchez & Cooknell, 2017). These concepts have become fundamental in online education for the nursing field (Decelle. 2016).

Implications for Nursing Practice

The purpose of this learning module is to provide nurses with the information in order to successfully complete an assessment for psychological distress. As it is self-directed in nature, it is our hope that this module will become a component of the nursing orientation process. As adult learners, we expect this should not be an issue under the key principles of andragogy. It is important, however, that nurses take this module seriously and actively participate in the case scenarios and self-reflection. Nurses are usually able to recognize when they are unable to communicate optimally with patients. Therefore, it is the intention of these case scenarios to put nurses in the clinical situations where their screening assessment is challenging. Once we receive feedback from learners, these clinical scenarios may need to be edited or additional scenarios added. The KT team expects that once the module is officially integrated into the nursing orientation, maintenance of the module must be done regularly to keep the module current, relatable, and accurate.

It is evident that nurses play a pivotal role in this screening process. Specifically, the nurse-patient relationship is an important determinant of patients' perceived benefits of a healthier lifestyle after a major cardiac event (Zrinyi & Horvath, 2003). Attentive nursing care and giving patients the opportunity to discuss health concerns are both highly influential in patients' perceptions of lifestyle changes and barriers. This emphasizes the importance of nurses

providing holistic care as well as continued emotional support to their patients during their time in hospital (Zrinyi & Horvath, 2003).

In addition to screening patients for psychological distress, nurses have the opportunity to use this time for patient education as well. The purpose of patient education is to provide the patient with information that empowers them to become self-sufficient once they are discharged from hospital (Sanchez & Cooknell, 2017). Due to shorter hospital admissions, patient education has become an even more important factor as patients and families are expected to provide more care after discharge. Thorough patient education helps to decrease patient anxiety, prepares the patient for discharge, and leads to fewer hospital admissions. During the screening process, nurses can use this time to educate patients and families about the presentation of psychological distress as well as the resources and treatment options available after they are discharged.

Depending on the learning module's efficacy, it could be potentially introduced to other cardiac units and settings. For example, outpatient clinics or cardiac rehabilitation programs could benefit from incorporating psychological distress screening for patients. The various cardiac settings, such as the hospital, clinic, physician's office, or cardiac rehabilitation centre are ideal for the opportunity to screen and treat psychological distress and should not be missed (Lichtman et al., 2008).

Implications for Future Research

There is little doubt that addressing psychological distress in cardiac patients is critical; however, there remains a gap between this knowledge and patients receiving optimal care (Huffman, Celano & Januzzi, 2010). With respect to future research overall, it will be important to learn more about how psychological distress contributes to cardiac outcomes. In addition, a better understanding of the mechanisms by which the psychiatric symptoms impair

cardiovascular health may allow for the development of more specific treatments (Huffman et al., 2010). Large randomized controlled clinical trials, if feasible, would help to determine whether existing treatment methods for psychological distress improve patient survival and other cardiac outcomes (Lichtman et al., 2014). This would provide highly valuable information on the impact of treatments from both the mental health and cardiac perspectives.

Clinically, it is important that the risks and benefits of routine screening for psychological distress are assessed, including the impact of screening in different contexts of care and the best means of implementation and coordination of care (Lichtman et al., 2014). Likewise, it would be beneficial to look at the systems that have implemented routine screening in order to assess various aspects of the infrastructure, such as screening tool performance and nurses' feedback on conducting screening assessments. Findings from such studies could help to improve the process of implementing screening for future projects.

With regards to this learning module, the educational process to facilitate learning how to perform screening through an online platform could be studied further. In previous years, topics such as this may have been more commonly addressed in a workshop context rather than an online learning module. Thus, it would be beneficial for educational purposes to assess whether learners were able to take this information and effectively incorporate it into their practice. The self-directed online learning format is more beneficial for certain types of learners than others (Decelle, 2016). For example, the lack of direct contact and the limited types of discussion can pose a disadvantage for learners with more of an auditory learning style.

Project Strengths and Limitations

Strengths of this project include the module being developed using evidence-based theory from reputable resources. It was kept succinct in order to limit the time burden on nurses during

their nursing unit orientation. In addition, the module is based on the STOP-D screening tool, which is a validated, effective screening tool for both depression and anxiety.

Some limitations of this project are that the module has not been trialed yet by any nursing staff. It would be beneficial to have some nurses test the module in order to obtain some feedback and make the necessary changes before its official introduction in the nursing orientation. However, it is our plan to seek out feedback from the nursing staff once the module has been released and subsequently the team will make the necessary edits.

Conclusion

Inpatients with CVD and psychological distress are often undiagnosed and untreated. Unfortunately, untreated psychological distress confers significant risk in cardiac patients, thus contributing to the morbidity and mortality associated with CVD. However, with an organized screening process, health care practitioners are able to conduct mood assessments that can identify those suffering from psychological distress. This allows the opportunity for the patient to receive both support and treatment.

This learning module is built upon the premise of continuing competency for nurses. The Canadian Nurses Association's (2004) position statement regarding continuing competence states that "individual nurses, as members of a self-regulating profession, are responsible for demonstrating commitment to continuing competence through lifelong learning, reflective practice and integrating learning into nursing practice" (p.1). As practice changes are a regular occurrence in the nursing profession, nurses must take an active role in such educational opportunities such as this learning module regarding screening patients with CVD for psychological distress.

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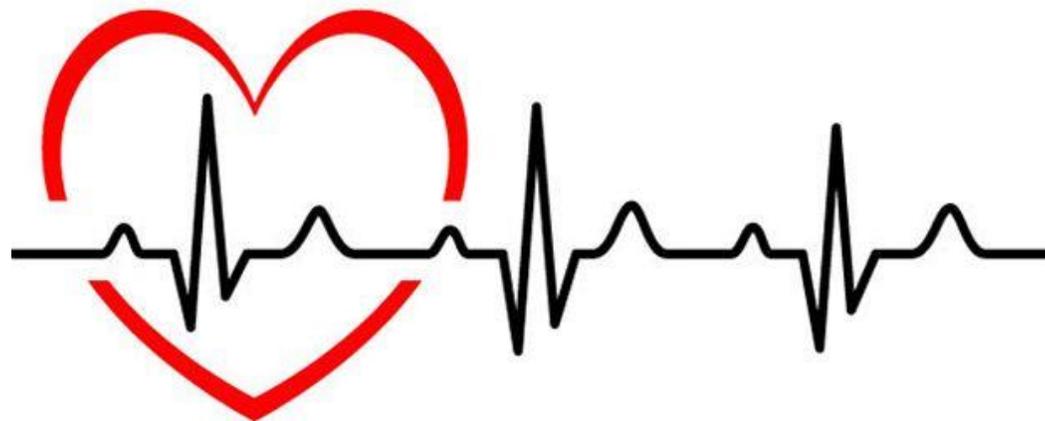
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Appendix

Psychological Distress Screening in Patients with Cardiovascular Disease

How to Conduct Screening in Nursing Practice Using the STOP-D Tool



Module Goals

Upon completion of this module, the learner will be able to complete the process for screening their patients with cardiovascular disease (CVD) for psychological distress. This will be done using the STOP-D screening questionnaire.



Learning Objectives

- STATE the prevalence of CVD and psychological distress
- DESCRIBE the rationale for in-patient screening for psychological distress
- LIST the steps involved in the psychological screening process
- DEMONSTRATE the psychological screening process using the relevant case scenarios

What is Cardiovascular Disease?



- Cardiovascular disease (CVD) encompasses all disorders of the heart and blood vessels.

These include:

- coronary heart disease - cerebrovascular disease
 - rheumatic heart disease - congenital heart disease
-
- Over **17 million people die** each year from CVD = 31% of all deaths worldwide

What are the Risk Factors?

Modifiable

- Hypertension
- Diabetes
- Dyslipidemia
- Obesity
- Physical inactivity
- Smoking

Non-Modifiable

- Age
- Sex
- Family history of CVD



What About Psychological Distress?

Psychological distress is defined as:

- a unique and discomfoting emotional state
- occurs in response to a specific stressor or demand that results in harm
- it can be either temporary or permanent

There are several types of psychological distress:

depression

anxiety

stress

anger

Let's Talk About Depression

- Depression is known to be the **most common mental illness** in the world.
- Common features of depression include:
 - chronic feelings of sadness, emptiness, or irritability
 - somatic and cognitive changes that significantly affect the individual's ability to function in daily life



How about Anxiety?

- Depression IS highly correlated with other types of psychological distress such as anxiety.
- Anxiety has been associated with:
 - progression of atherosclerosis
 - decreased variability in heart rate
 - increased risk of ventricular arrhythmias
- The prevalence of anxiety varies from **10% - 60% in patients with CVD**

But What is the Risk?

Evidence has shown that **psychosocial factors** play an important role in predicting **morbidity** and **mortality** of people with CVD

The risk of experiencing a mood or anxiety disorder such as depression is **2-3x** higher in patients with a chronic degenerative disease such as CVD



So What Does That Mean?

Depression predicts CVD incidence and severity through multiple potential biological and behavioural mediators:

- Smoking
- Physical inactivity
- Medication nonadherence
- Lower heart rate variability
- Toxicity from antidepressants
- Greater catecholamine levels
- Poor diet
- Lower omega-3 fatty acid levels
- Platelet activation
- inflammatory processes

Let's take a look at this Youtube Video

<https://www.youtube.com/watch?v=Im7iYFqsGDE>

In-Patient Screening



- The strong association between CVD and psychological distress highlights the importance of **early detection** and **awareness** through screening.

Clinical practice guidelines recommend routine screening for depression and anxiety following any cardiac event

The Screening Tool for Psychological Distress (STOP-D)

- The Original tool:

- A 5-item questionnaire
- Provides severity scores for each common psychosocial risk factor

St. Paul's Hospital Heart Centre uses only two items - depression and anxiety

- What are the advantages?

- can be completed by patient in approximately one minute with minimal assistance from a health professional
- requires no time for scoring or interpretation

The Original STOP-D Screening Tool

Over the last 2 weeks, how much have you been bothered by:										
1. Feeling sad, down, or uninterested in life?	0	1	2	3	4 ^a	5	6	7	8	9
not at all				a little			moderately			severely
2. Feeling anxious or nervous?	0	1	2	3	4 ^a	5	6	7	8	9
not at all				a little			moderately			severely
3. Feeling stressed?	0	1	2	3	4	5 ^a	6	7	8	9
not at all				a little			moderately			severely
4. Feeling angry?	0	1	2	3	4	5 ^a	6	7	8	9
not at all				a little			moderately			severely
5. Not having the social support you feel you need?	0	1	2	3	4	5 ^a	6	7	8	9
not at all				a little			moderately			severely

^aRecommended cutoff scores based on receiver operating characteristic curve analyses.
Source: Author.

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(Young et al., 2007; Young et al., 2015)

The Step-by-Step Guide to using the STOP-D

Our aim is to identify patients who may be experiencing depression and/or anxiety *before they are discharged*, so that we can give them both information and advice.

When should the interview occur?

Ideally 1-2 days before discharge.

Try to estimate when this will be - even if a discharge date hasn't been set.

How Do I Do This?

These are the Steps to Conducting a Successful STOP-D
Screening Interview:



Step One

Take the *STOP-D Mood Assessment* form into the patient's room, introducing it with something like “We are interested to know how your mood has been”.

Important to Note: *If family members are present - either you can kindly ask them to step outside as we start some of the discharge process OR you may choose to do the assessment at another time. Patients also have the option of having their family member or friend present.*

- If there is a language barrier, engage with telephone translation services

Step Two

Using our recommended cues for conversation, ask the patient to complete the *STOP-D Mood Assessment*

- *leave it with them for approximately two to three minutes*

Step Three

While the patient is completing the assessment, gather the following documents:

- Depression and Anxiety Assessment
- Depression and Anxiety Assessment Information for Family Physicians
- Discharge Handouts for Depression & Anxiety

Step Four

Discuss the results from the assessment with your patient, using the phrases on the Depression and Anxiety Assessment form.

- *See laminated sheets for conversation cues and important points to highlight while having this discussion, including the offer of spiritual care support where indicated*

Step Five

Enter the scores from the *STOP-D Mood Assessment* onto the *Depression and Anxiety Assessment Form* under the “Your Score” Column

Getting the Conversation Going:

Some Cues

“Did you know that patients with heart disease actually have an increased risk of developing depression and anxiety?”

“We like to check in while you are in the hospital to help prepare you for going home and understanding how you may feel. You may feel ok now, but some patients experience an increase of worry, fear, sadness, etc. when they get home...”

“It is ok to feel.....” (whatever the patient has indicated they are feeling)

“All emotions are NORMAL, however if you are experiencing feelings such as increased worry, fear, or sadness for over 3 weeks, you should definitely discuss this with your family doctor”

“If you need someone to talk with during your hospital stay, our spiritual health staff are always available for emotional support, for people of ALL cultures and backgrounds”



Key Points to Review With Your Patient

- Depression, Anxiety and Stress information sheets
 - Highlight STOP-D scale on back of both *Depression and Heart Disease* and *Anxiety and Panic* handouts
 - Suggest they re-evaluate themselves at home as well
- A report will be sent to their family doctor
 - encourage to take their copy of *Depression and Anxiety Assessment Form* to their first family doctor visit post-hospitalization
- Talking with their family doctor about their emotional wellbeing is very important!

Key Points Continued...

- HeartTV (closed-circuit system at each bedside) has programs related to “heart disease and emotions” (Channel 74)
 - Recommend and encourage them to watch the programs by using the tear-off sheet with time reminders
- Review recommended websites
 - Can be while in hospital or upon discharge
 - Provide further guidance and information

To Finish the Assessment...

- Finish the discussion by giving a copy of *Depression and Anxiety Assessment Form*
- Confirm that the correct family doctor is on file
- Fax a copy (or request UC to do so) of the *Depression and Anxiety Assessment Information for Family Physicians* form to the patient's family doctor
 - * *Tip: Physicians' fax numbers can be found on SCM **
 - Highlight the patient name
 - Click on the patient info tab at the top of the page
 - Select "Care Providers" on the left side of page
 - Double click on "Family MD"
 - If the fax number is not available OR the fax doesn't go through, discard the *Depression and Anxiety Assessment Info for Family Physicians* form.

Then You Will...

- File the original *Depression and Anxiety Assessment* form (patient's version) and *Depression and Anxiety Assessment Info for Family Physicians* form, if it was successfully faxed, in the **Screening Tools** section of the blue binder
- Document on the 24-Hour Flow Sheet and note that you have completed the Depression and Anxiety assessment as per the protocol under the "Psychological" section

Now for some practice with case scenarios...

The patient refuses the mood assessment.

e.g., “I’m fine”, “Why? This has nothing to do with my heart”. “None of your business”

Write down what your approach would be in this situation.

It is important to note with this case scenario:

- screening for psychological distress may detect a group of patients that appreciate the fact that they receive attention for their problems, but who also show resistance to being diagnosed as having psychological distress
 - the nature of the illness itself can hinder patients feeling willing to participate in screening
 - depressive symptoms, such as guilt, feelings of failure and fatigue, hamper help-seeking behaviour..
-
- Acknowledge the patient's right to refuse screening – but explain that it is our protocol to screen all patients with CVD for psychological distress because of their strong association and because we are concerned about the *whole* person

- Mention to your patient that even though they may not feel any distress right now, they may start to notice mood changes in the next few weeks or months and that they need important to be aware of this so they can seek the appropriate treatment at that time
- Offer the handouts so that the patient may read them on their own



Now let's try this one...

Your patient scores high (8 or 9) on the STOP-D screening tool.
What would you say to your patient about their score and our intervention?

How and when do you call psychiatry?

- Acknowledge that your patient has scored high (8 or 9) on the scale but this is **not** a diagnosis!
- Explain that the process from this point is to arrange a meeting with psychiatry to explore their mood and feelings further (This will allow our team to implement any further treatments and/or provide additional resources to make the patient's overall transition out of hospital as smooth as possible)
- Provide reassurance to your patient that their mood and feelings are common with CVD and that we, as a team, are here to help work through this.
- Ask if they have any questions

Important To Note:

- The score for triggering a psychiatry consult is not an absolute fixed rule
- Use your nursing judgement to decide who may need more intensive follow-up (e.g. if the score is less than 8 but patient seems very distressed or agitated)

Always include the patient in this discussion about referral to psychiatry

Treatment Options

These are the most common treatment options available to your patients experiencing psychological distress:

- Antidepressant Drugs
- Cognitive Behavioural Therapy
- Physical Activity/Exercise
 - Aerobic exercise and cardiac rehabilitation



Summary

- Evidence has shown that **psychosocial factors** play an important role in predicting **morbidity** and **mortality** of people with CVD
- Clinical practice guidelines recommend routine screening for depression and anxiety following any cardiac event
- The STOP-D screening tool is a free, simple and valid method for identifying hospitalized cardiac patients who are experiencing psychological distress
- There are various resources such as a step-by-step guide, conversation cues, and unit champions available to our cardiac Nursing team to aid in performing a mood assessment using the STOP-D screening tool

Self-Assessment Questions



Try these out and see how much have learned!

1. When should you perform the Mood Assessment on your patient?
 - A) On the morning of the planned day of discharge.
 - B) 1-2 days before the patient's planned day of discharge.
 - C) Whenever you feel that you have time with your busy patient workload.
 - D) With the initial admission assessment.

2. A patient's family member insists on being present for the Mood Assessment. The patient is agreeable to having them stay. What is your response?

A) Explain to them that the assessment must be done with only the patient.

B) Tell them that you are not comfortable to perform the assessment with family members present.

C) Perform the mood assessment of your patient with the family member present.

D) Wait until the family member leaves and try again.

3. Your patient scores a 6 on the STOP-D questionnaire. However, their mood appears to be really low and they have no motivation to participate in their care. What should you do?

- A) Leave them alone – they probably just need some time to themselves to think about their health.
- B) Set up a psychiatry consult immediately.
- C) Have a conversation with them about your assessment. Validate their feelings and discuss with them about a referral to psychiatry for further assessment.
- D) Tell them they should start feeling better in a couple of days.

4. Your patient refuses a Mood Assessment. What is your response?

- A) Tell them that refusal is not an option and that you will do the assessment anyways.
- B) Explain that you will come back later and try again when they are in a better mood.
- C) Go through the reasons why this is so important to their health and let them know they are make a huge mistake.
- D) Acknowledge their right to refuse screening – but explain that it is our protocol to screen all patients with CVD for psychological distress because of their strong association and because we are concerned about the *whole* person

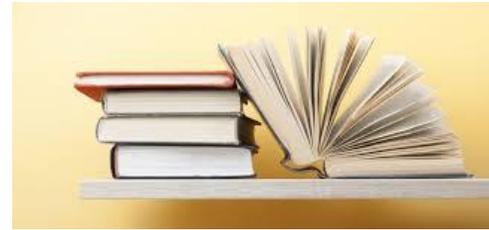
Don't Forget to...

After you have completed your first few assessments – make sure to reflect on how it went for you. What went well? And what would you change for next time?

Feel free to speak to your Clinical Nurse Educator, your Clinical Nurse Leaders, or your Unit Champions if you have any questions or concerns regarding the STOP-D Mood Assessment process.



Resources



You can also check out these websites for further information:

<https://www.heartandstroke.ca/heart/recovery-and-support/emotions-and-feelings/depression>

<https://www.heartandstroke.ca/articles/healing-the-mind-after-heart-attack>

<https://www.heartandstroke.ca/heart/recovery-and-support/cardiac-rehabilitation>

<https://www.heart.org/en/healthy-living/healthy-lifestyle/mental-health-and-wellbeing/how-does-depression-affect-the-heart>

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