A Mindful Heart: Skills-Based Stress Management for Primary Care

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Faculty Disclosure

I have not had any relevant financial relationships during the past 12 months.
Objectives

1: Participants will gain knowledge regarding the impact of CVD on the U.S. healthcare system.

2: Participants will gain an understanding of evidenced-based group approaches for the management of hypertension in medical settings.

3: Participants will be introduced to a proposed group intervention for the management of hypertension in a primary care setting.
Overview

• Introduction
  – Topic/diagnosis
  – Prevalence

• CHD and risk factors

• Interventions

• Proposed intervention for primary care
  – Group length
  – Skills developed
  – Expected Outcomes
Introduction

- Coronary heart disease (CHD): the number one cause of mortality of men and women in the United States (Center for Disease Control and Prevention, 2009).
- Because of the significant prevalence, it is important to treat this condition in primary care
  - Hypertension (most common diagnosis in primary care – after routine check-ups)
- Other medical conditions are related to CHD (e.g., diabetes, obesity, hypertension, hypercholesterolaemia; Haas, 2004).
- There are numerous causes of CHD (e.g., biological) and many of the causes are related to psychological and lifestyle factors.
Coronary Heart Disease

• **What is CHD?**
  – the development of atherosclerosis (the development of fatty deposits in the coronary arteries) over time which decreases blood flow to the heart (Schobitz, Bauer, & Schobitz, 2009)
  – Decreased O₂ can lead to angina

• **Myocardial infarction**
  – an occlusion (complete blockage) of the artery is caused when a piece of the fatty deposit tears off and in order to heal itself, platelets accumulate in the lumen (space in the vessel wall), causing the occlusion to progress.
  – the heart is deprived of blood and oxygen leading to an MI (tissue death).

• When heart damage is present, the following enzymes present in the blood: troponin, myoglobin, and creatinine
Coronary Heart Disease

Plaque build up in the coronary artery blocking blood flow and oxygen to the heart

Damage and death to heart tissue shown in purple

Courtesy of
Risk Factors – Unmodifiable

- Age
- Gender
- Family history
Risk Factors - Modifiable

- Hypertension
- High cholesterol
- Cigarette smoking
- Sedentary lifestyle
- Obesity
- Psychosocial:
  - Stress
  - Negative emotions
  - Anger
  - Hostility
Overview

- Psychosocial intervention: **stress management**
- Reduced the rate of cardiac events by over 40% (Haas, 2004).
- Group interventions that have been found to be effective for managing stress and reducing hypertension in heart patients include patient education, arousal reduction, cognitive restructuring, monitoring Type A behavior, and behavioral skills training (Dusseldorp, van Elderen, Maes, Meulman, & Kraaij, 1999; as cited in Haas).
Lifestyle Heart Trial (Ornish et al., 1983; as cited in Billings, Scherwitz, Sullivan, Sparler, & Ornish, 1996)

- Examined the short-term effectiveness of lifestyle changes on reducing the modifiable risk factors for CHD

- Included:
  - Exercise, stress management techniques, nutrition, and group support

- Results indicated that the heart patients were able to maintain the behavioral changes for four years after the completion of the program

- Physiological changes observed in the patients and were more prominent after the first year of the completion of the intervention

- Frequency of angina decreased and a decrease in coronary atherosclerosis was observed as well
Group Format

- Of all the components examined in this trial, the group component was seen as critical.
- Patients were able to learn from the other group member’s experiences as well as build communication skills that focus on the appropriate expression of feelings.
- CHD patients tend to use the emotions of anger, frustration, and hostility more often than “softer” feelings such as patience which could increase vulnerability.
Patient Education

- Patients may be unaware of other factors such as emotional characteristics (e.g., depression, anger) and their influence on the development of CVD (Burell, 1996)
- Patient education is important for treatment adherence so in order to help patients initiate and maintain behavior change, combining education along with skills training can help patients adapt the new information to their daily lives
- New Life Trial: a secondary prevention program with an aim of altering coronary-prone behavior in postcoronary artery bypass graft (CABG)
- Significant difference in CVD mortality rates, the number of MIs, reoperation, and angioplasty between patients in the treatment group versus the control group.
- Reductions in self-rated TAB patterns as well as Beck Depression Inventory scores.
Relaxation Techniques

• Because of the relationship between stress and CVD, it is important that stress management interventions have a relaxation component (Friedman, Myers, Krass, & Benson, 1996).
• These components include: diaphragmatic breathing, progressive muscle relaxation, and meditation techniques.
• Goal: help patients recognize their (emotional and cognitive) triggers and cues of physical arousal and reduce sympathetic nervous system arousal.
Relaxation Techniques

• Olivo, Dodson-Lavelle, Wren, Fang, and Oz (2009) examined the effectiveness of a brief (4-week) meditation-based stress management program for patients diagnosed with or at risk for CHD in an acute care setting (commuter hospital).

• Adapted the 8-week Mindfulness-Based Stress Reduction (MBSR) program developed by Jon Kabat-Zinn. The MBSR program can provide “…systematic mindfulness mediation training to a population with a wide range of chronic medical and stress-related disorders” (p. 515).

• In addition to receiving training in mindfulness meditation and applying it to daily living, the following three components were addressed in the program: guided sitting meditation, body scan meditation, and yoga.

• Study found reductions in perceived stress and depression scores.
Relaxation Techniques

- Rainforth et al. (2007): A meta-analysis was completed comparing 17 randomized control trials with 23 treatment comparisons in order to assess blood pressure (BP) changes.
- The following treatment categories were assessed in the systematic review: simple biofeedback, relaxation-assisted biofeedback, progressive muscle relaxation, Transcendental Meditation (TM), and stress management combined with relaxation.
- The results did indicate that the **TM program** significantly reduced systolic and diastolic BP.
- It is recommended to add a TM component to stress management programs for heart patients due to its ability to promote homeostasis and modulate the neuroendocrine and physiological mechanisms associated with stress.
Cognitive Restructuring

• Although traditional cognitive restructuring exercises can be effective, an intervention that can facilitate this process is known as the “Hook,” which targets “…chronic emotional reactivity to minor, unexpected stressors” (p. 314).

• Because emotional reactivity (e.g., anger, impatience) is a key factor in coronary-prone behavior, this intervention is geared towards heart patients.

• Pure environmental determinism and the malleability of the environment
  – Pure environmental determinism: the patient believes that other people or external situations are the cause of the patient’s stress.
  – Malleability of the environment: the patient believes that they can control all aspects of their external environment. In other words, when a stressor occurs, the patient first blames someone (or something else) for the stressor and in order to correct the situation, the patient attempts to change the external object or situation.
The “Hook”

- Hook intervention: aims to replace the patient’s faulty belief or attitude with an alternative belief that is less prone to emotional reactive responses such as anger or irritability (Powell, 1996).
- Patient is presented with three (discussion) questions:
  - What is behavior modification? (change others or change the way you think about others?)
  - What is impatience/irritation? (What is your “hook”?)
  - What can we do about it? (labeling stressors as hooks rather than unfair situations; enhanced personal control)
- Postcard reminder
- Help from group members (card used as reinforcement)
Type A and Type D vs. Type B Behavior Change

- The skills developed in cognitive restructuring can aid the patient in altering TABPs.
- Rosenman, Swan, and, Carmelli (1988; as cited in Bracke & Thoresen, 1996) describe the TABP as the following:
  - Intense, sustained drive to achieve self-selected but often poorly defined goals;
  - Profound eagerness to compete and need to “win;”
  - Persistent desire for recognition and advancement;
  - Continuous involvement in multiple and diverse activities under time constraints;
  - Habitual tendency to increase the rate of doing most physical and mental activities;
  - Extreme mental and physical alertness;
  - Pervasive aggressive and hostile feelings (p. 257).
Type A vs. Type B Behavior Change

- Recurrent Coronary Prevention Project (RCPP) incorporated Type A counseling which took place over 28 sessions at 90 minutes per session over the course of a year and also used a small-group format.
- The primary goal: “…help post-MI participants gain a better understanding of how and why TABP may impact them physically, socially, and emotionally at work, at home, and in the community and, subsequently, to reduce TAB” (p. 265).
- The goal is to be less Type A through the use of relaxation and cognitive-behavioral exercises in order to gain Type B qualities (e.g., patience, empathy).
Type A and Type D vs. Type B Behavior Change

• The results of the study showed a 40% difference in the number of cardiac events between the Type A counseling group (7.2% recurrence rate) and the cardiac counseling group (control; 13% recurrence rate).

• After a four year follow-up, significant differences were found between both treatment groups as well as reduced levels of TABPs.
Type A and Type D vs. Type B Behavior Change

- TDBP refers to the personality traits of negative affectivity and social inhibition (Mols & Denollet, 2010).
- Negative affectivity is defined as a tendency to exhibit negative emotions and social inhibition is defined as refraining from the expression of emotion due to a fear of rejection.
- It has been found that between 27% and 31% of CVD patients exhibit TDBP and this behavior pattern is also an independent predictor of MIs, poor health status, and increased mortality in heart patients (Pederson, Theuns, Muskens-Heemskerk, Erdman, & Jordaens, 2007).
- Psychosocial interventions are key
Summary

• Treatments effective but intensive
• Interventions conducted in cardiology departments and medical centers rather than ambulatory care
• Important for future studies the examine the effectiveness of stress management programs in primary care
A MINDFUL HEART: SKILLS-BASED STRESS MANAGEMENT FOR PRIMARY CARE
Program Overview

• The purpose of examining CVD risk factors is because currently, CVD is the leading cause of death in the United States and many of the risk factors are modifiable.

• A large amount of patient visits to primary care have a primary diagnosis of hypertension or diabetes so it is important to address these factors in order to reduce the chance of the development of this disease (Schappert, & Rechtsteiner, 2008).

• Target audience: adults (18 years and older) who meet the following criteria:
  – At least one MI and/or:
  – Meet at least one of the risk factors for the development of CVD (as determined by their primary care physician and the behavioral health consultant):
Program Overview

• Endorsing “yes” to the following questions: 1) Do you consider yourself an angry person? 2) Do others consider yourself an angry person?
• High cholesterol (total cholesterol above 240 mg/dL and low-density lipoprotein above 160 mg/dL)
• Hypertension (higher than 140/90)
• Cigarette smoking
• Diabetes (Type I or Type II)
• Obesity (body mass index > 30 kg/m²)
• Sedentary behavior
• Metabolic syndrome (at least three of the following: waist circumference >35 inches, triglyceride levels > 150 mg/dL, high-density lipoprotein < 50 mg/dL in women and < 40 mg/dL in men, hypertension and fasting glucose > 100 mg/dL)
• Patients will also rank their stress levels related to life and employment on a scale from 1 to 10 (with 10 being the most stressful). A score of 5 or higher would be considered a risk factor
• Additional nonmodifiable risk factors include old age, male gender, family history, and a genetic predisposition (Dornelas, 2008).
Program Overview

• The focus of the program will be to provide primary care patients with the appropriate skills to better manage stress.
• The stress management skills addressed in the program have been particularly developed for patients with cardiovascular problems.
• The group is designed to accommodate 8 to 10 patients per rotation.
• This group is also designed to be a closed group consisting of four weekly sessions lasting one hour per session.
Program Overview

- **Outcomes:**
- PSS-10
- Duke Health Profile (The DUKE)
- DBP/SBP
Session 1 - Psychoeducation

- Introductions
- Pre-group Assessment
- Definitions of hypertension, MIs, and CHD
- Stress and Heart Health
- **Homework**: Identifying physical cues of stress (Monitoring form)
- **Session goal**: develop a knowledge-base regarding heart disease and behavioral/psychological reactions to stress
Session 2 – Mindfulness and Relaxation Training

• Review homework
• Presentation of different stress reduction and relaxation techniques
  – Mindfulness Training
  – Progressive Muscle Relaxation and Deep Breathing
  – Visualization
• **Homework**: patients will choose one (or more) techniques to try at home and will discuss their experiences with the technique during the next session (Diary form will be provided)
• **Session goal**: familiarize patients with different relaxation techniques to manage stress
Session 3 – Cognitive Restructuring

• Review homework
• Explanation of ABCs and cognitions (Activating Event, Beliefs, Consequences)
• Overview of the “Hook”
• Challenging Your “Hook”
• **Homework**: patients will be provided with a stress log and track stressors in order to identify their “hook” and their reaction to the hook
• **Session goal**: Expand the coping options of the patient; responding and acting rather than reacting to daily stressors
Session 4 – Reducing Arousal

- Review homework
- Overview of Type A, Type B, Type C, and Type D behavior patterns and the affect on the heart
- Review of Type A inner dialogue:
  - All-or-Nothing Thinking
  - Overgeneralizations
  - Devaluation of self and others
  - Mindreading (negative predictions)
  - Catastrophizing
- Identification of patient behavior pattern
- Challenging the inner dialogue
- Termination/Wrap-up/Post-Group Assessment
- **Session goal:** identification and reduction of self-destructive thoughts and behavior; improving the patient’s ability to effectively cope with daily life stressors applying the skills acquired in sessions 1, 2, and 3
Questions???

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References

References


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Session Evaluation

Please complete and return the evaluation form to the classroom monitor before leaving this session.

Thank you!