

Psychological Well-Being in Patients with Heart Failure: A Brief Review of the Existing Literature



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Abstract

Psychological well-being is a positive mental state of happiness. It has a protective role in cardiovascular health. Heart failure outcomes are affected by the health behaviors that affect psychological well-being. Published evidence is available for medical interventions in the heart failure management, and the research focus is now being shifted to the role of psychological well-being in the effective management of heart failure. This review examines evidence on the key factors that affect and promote the psychological well-being. This review also focuses on the effect of positive and negative psychological aspects of cardiovascular health and outcomes. An overview is provided on the practices that improve cardiovascular health. In conclusion, the health behaviors that promote positive health, in turn, promote the cardiovascular health and improve outcomes in heart failure patients.

Keywords: Well-being; Heart failure; Health behaviors

Introduction

The pharmacological aspect of heart failure management was studied well, and there are many published guidelines in that area. However, psychological well-being has gained focus only in the recent years. Several prospective and meta-analysis studies were done which linked psychological well-being with cardiovascular health. Positive psychological factors including positive relationships, self-acceptance, and optimism have a protective effect on cardiovascular health while negative psychological factors such as depression and anxiety have a role in the progression of the heart diseases. Taking measures to prevent or control the negative psychological factors can improve cardiovascular morbidity.

Discussion

Psychological well-being

Psychological well-being refers to one's pleasant emotional and cognitive experiences [1]. Hedonic and Eudaimonic well-being are the 2 general perspectives for understanding psychological well-being. Hedonic well-being defines the well-being as avoidance of pain and attainment of happiness. Eudaimonic well-being defines the well-being in terms of self-realization and achievement of

one's full functioning potential. Ryff proposed dimensions of well-being, which are the purpose in life, autonomy, personal growth, environmental mastery, positive relationships, and self-acceptance [2]. Global well-being is another approach to psychological well-being and is defined as person's overall assessment of his or her life.

Stone et al. [3] performed a telephone survey of 340,847 people in the United States and identified that Global well-being and positive Hedonic well-being are increased after the age of 50 years [3].

The factors that affect psychological well-being

Multiple research studies were done in the past to identify the behaviors that are linked to well-being. Edwards et al. studied the effect of health behaviors such as exercise on well-being and identified that compared to nonexercising subjects, higher psychological well-being was shown by those who engage in various exercise habits [4].

Sleep is another essential behavior studied. Insomnia is significantly associated with lower levels of hedonic and eudaimonic well-being [5]. Carr et al. [6] studied the association

of weight and body consciousness with well-being and reported that overweight or obese subjects showed lower levels of self-acceptance compared to normal weight subjects [6]. Wink et al. [7] performed a longitudinal study and examined the relation between religiousness, spirituality, and well-being and identified that religiousness and spirituality are positively associated with psychological well-being in the late adulthood [7]. Optimism [8], and self-esteem [9] are the 2 other psychological variables which predict higher psychological well-being. Factors such as situational efficacy beliefs, personality, and coping processes are responsible for the development and maintenance of psychological well-being among individuals with serious illness [10].

Brown et al. [11] examined the role of mindfulness in well-being and identified that mindfulness is associated with enhanced self-awareness. A clinical intervention study was described which demonstrated increases in mindfulness over time related to declines in mood disturbance and stress [11]. Association between Tai Chi and improvements in psychological well-being is very well established [12].

In a systematic review and Meta-analysis by Goyal et al. [13] it was concluded that meditation programs result in reductions in anxiety, depression, pain and stress [13]. Exercise and physical activity are also associated with better quality of life [14].

Relation between psychological well-being and heart failure

Heart failure is a clinical syndrome that results from ischemic or non-ischemic cardiomyopathy resulting in structural or functional impairment of ventricular filling or ejection of blood and is a major cause of morbidity and mortality. The incidence of heart failure is increasing steadily [15]. Interventions such as Medications, exercise, and diet regimens are the mainstay of therapy for heart failure management. However, the psychological correlates of heart failure have gained attention in the recent years. Stress causes tachycardia which in turn causes increased myocardial oxygen demand and reduction in the myocardial oxygen supply. Depression, anxiety, social support, and coping styles are identified as the essential psychological factors affecting heart failure patients [16]. Ferketich et al. [17] identified that depression is a risk factor for further cardiac events and increases morbidity and mortality [17]. Anxiety has a negative effect on the cardiac functioning in heart failure patients [18] whereas social support has a positive effect on heart failure outcomes [19]. The psychological well-being also depends on the coping mechanisms [20].

A meta-analysis performed by Chida et al. [21] discovered a significant reduction in cardiovascular mortality with positive psychological well-being [21]. The anxiety and depression scores vary with the NYHA class, it was identified that the scores are higher in New York Heart Association (NYHA) class III patients in comparison to NYHA class I and II patients [22]. Physical

decline is associated with the social and psychological decline in advanced heart failure patients [23]. Huzen et al. [24] performed a cross-sectional analysis and identified that shorter leukocyte telomere length is associated with decreased perceived mental health [24]. Juenger et al. [25] identified the global reduction in quality of life in the heart failure patients but the patient sample studied in this study does not represent the typical heart failure population seen in the community because it was performed at a tertiary referral center [25]. Self-efficacy is also an important factor that is associated with quality of life in HF patients [26].

Multiple studies that were conducted in the past confirmed the positive effect of cardiac rehabilitation on heart failure outcomes which prompted many third-party payers to provide medical insurance coverage for supervised cardiac rehabilitation [27]. In their study to assess the effects of exercise training in chronic heart failure, Koukouvou et al. [28] concluded that exercise rehabilitation improves work capacity and psychosocial status in patients with heart failure [28]. Supervised exercise training was proven to improve cardiorespiratory fitness and quality of life in post-myocardial infarction patients [29] and mortality in Heart Failure with Reduced Ejection Fraction (HFrEF) patients [30]. Pan et al. [31] performed a meta-analysis and suggested the inclusion of Tai-Chi in the cardiac rehabilitation program because of the significant improvement in the quality of life with Tai-Chi in heart failure patients [31].

Conclusion

Previously published meta-analyses and review articles established that Hedonic and Eudaimonic well-being are associated with improvement in cardiovascular health. Behaviors like exercise, sleep, weight and body consciousness, optimism, self-esteem, religious participation and religious experience were studied and found to have a statistically significant association with the psychological well-being. Mindfulness, Tai Chi, exercise and physical activity are associated with better quality of life and health outcomes. Based on the results of the studies as mentioned earlier, optimal management of heart failure should include improvement of psychological well-being along with medication interventions, exercise and diet regimens. The future studies should focus on explaining the quantitative effect of the health behaviors on heart failure morbidity and mortality.

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