

The Effect of Green Walking on Quality of Life and Disease Perception of Myocardial Infarction Patients: A Review

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Abstract

Myocardial infarction is a fatal disease worldwide and negatively affects the quality of life. Patients with myocardial infarction have difficulty performing activities of daily living and returning to social life. These patients may develop a negative perception of the disease. Modifiable risk factors for myocardial infarction include hyperlipidemia, hypertension, obesity, diabetes, smoking, alcohol consumption, physical inactivity, periodontal disease, diet, and stress. Green walking is critical to preventing physical inactivity. Walking in different types of nature, in different periods, and with varying degrees of difficulty is defined as green walking. Today, participation in activities in nature has increased. Nature has the known effects of reducing stress and cortisol levels, improving mood, and lowering blood pressure known from exercise. Green walking is recommended for myocardial infarction patients to protect heart health and improve quality of life. This review examines the effects of green walking on the perception of disease and quality of life in myocardial infarction patients.

Keywords: Perception, nature, myocardial infarction, quality of life, walking

Introduction

Coronary artery disease (CAD) stands at the forefront as the leading global cause of mortality, resulting in approximately 17.8 million fatalities annually [1]. The World Health Organization (WHO) has reported that cardiovascular diseases (CVD) were responsible for 32 % (17.9 million) of all worldwide deaths in 2019 [2]. Within our nation, circulatory system diseases contribute to a mortality rate of 37 %, with CAD constituting 12 % of this figure [3]. Notably, existing literature suggests that CAD is linked to around 85 % of deaths resulting from myocardial infarction (MI) and strokes [4].

Myocardial infarction precipitates a complete cessation of perfusion to myocardial segments due to abrupt coronary artery blockage. Factors contributing to severe and persistent ischemia lead to substantial loss of heart muscle mass and the demise of cardiomyocytes [1]. The American Heart Association (AHA) prescribes a recommended exercise intensity for MI prevention, advocating for 30 minutes of activity five times per week to accumulate a minimum of 150 minutes weekly or 25 minutes of exercise three times weekly, up to at least 75 minutes per week. Physical activities yield multiple benefits; they enhance cardiac blood supply by fostering collateral vessel formation, diminish the likelihood of recurrent MIs, lower blood pressure through arterial expansion, and mitigate the risk of coronary occlusion by reducing

blood viscosity and platelet aggregation. Additionally, exercises augment cardiac workload capacity, functional aptitude, heart rate, and cardiac pump efficacy and concurrently diminish the mortality rate [5].

Experiences immersed in nature exert calming influences, contributing to the burgeoning attention surrounding the therapeutic potential of natural settings. Various studies have illuminated nature's favorable impact on physical and mental well-being. Time spent in forest environments fosters enhancements in immune functionality, with this beneficial effect extending for approximately one month. Notably, individuals engaging in green walking manifest diminished anxiety, depression, anger-hostility, confusion, fatigue, and overall mood disturbances, simultaneously experiencing elevated levels of well-being and life energy [6].

The European Guidelines for the Prevention of Cardiovascular Diseases in Clinical Practice underscore the pivotal role of nurses in executing heart health initiatives encompassing dietary interventions, cholesterol management, exercise regimens, hypertension control, and more, as integral components of primary prevention strategies. These guidelines place a strong emphasis on nurses' capacity to be impactful and proficient healthcare providers in the management and sustenance of cardiovascular health [7]. Initiatives aimed at creating a positive perception of the disease in MI patients and improving the

quality of life through green walking will be examined in the context of literature.

1. Green Walking

Nature-based sports encompass a cohesive assortment of physical endeavors that possess the potential to challenge participants, introducing an alternative perspective to conventional approaches in sports activities [8]. Extreme sports are in outdoor settings, specifically within natural or rural landscapes. These environments serve as apt locales for the execution of outdoor sporting pursuits [8]. These spaces encompass diverse natural features, including seas, rivers, watercourses, canyons, mountains, snowy terrains, cliffs, rocky surfaces, woodlands, caves, and the expansive sky. Extreme sports entail a dynamic interplay between participants and these innate elements and are shaped by the dynamic forces hailing from waves, gravity, thermal currents, wind, rain, and solar influence [9].

According to the Europarc Federation (2018), a mounting body of evidence suggests that engaging with the natural environment, including partaking in extreme sports activities, can play a role in safeguarding against, treating, and managing significant health concerns such as depression, CAD, stroke, Type 2 diabetes, obesity, and dementia. The therapeutic and rejuvenating attributes of outdoor sports pursuits contribute to the healing process and alleviate feelings of social isolation. These activities foster community unity and facilitate the cultivation of healthful behaviors throughout one's lifespan [10].

1. Activities at Sea: Sail sports, scuba diving, water skiing, ship voyages, underwater rafting, fishing, jet skiing, windsurfing, parasailing, jet boating.

2. Activities in the Air: Bungee jumping, gliding, parachute jumping, hand gliding, paragliding.

3. Activities on Land: Mountaineering, mountain biking, river-based sports (rowing, rafting, canoeing), off-roading, canyoning, spelunking, rock climbing, green walking, orienteering, etc. [11].

2. Categories of Green Walking

Extreme sports, delineated into two categories known as "nature-related" and "nature-dependent," have garnered significant attention recently. Green walking encompasses a diverse spectrum of activities performed across various natural settings, time frames, and difficulty levels. Green walking is considered a subset of nature-related sports, and the specific environments suitable for such walks vary based on the type of walking undertaken [12].

2.1. Daily Green Walking

Green walking can be categorized into daily and long-term variants. A Daily green walking entails a designated route featuring predetermined start and endpoints. This type of walk is suitable for individuals in good physical condition, possessing familiarity with trail paths, valleys, and forests that have been previously mapped out. To mitigate potential risks associated with green walking, the presence of a guide is crucial. This guide need not possess advanced

expertise or extensive technical knowledge but should possess insights into the route and potential hazards it entails [13].

2.2. Long-Term Green Walking

Long-term green walking encompasses excursions lasting two days or more, undertaken within regions possessing specific walking paths or in areas without designated trails. The distinction from short-term green walking lies in its extended duration, allowing exploring uncommon natural marvels previously unseen, particularly in mountainous terrains or at elevated altitudes. Commencing and concluding points differ, and the walk extends over an extensive timeframe. Such walks, necessitating overnight stays, may span 48 hours or beyond. The difficulty level varies based on stages and the unique geographical features characterizing the location of the green walking. Engaging in prolonged green walking mandates distinct knowledge and competencies, encompassing rudimentary camping skills, understanding of geography, and climbing techniques, along with motivation and organizational abilities. This endeavor, suitable for individuals equipped with the necessary physical attributes and fitness, can be undertaken with the accompaniment of a guide or as part of a group, and experienced individuals might opt to undertake it solo [13].

Engaging in green walking yields numerous benefits, ranging from blood pressure regulation to fortification of various muscle groups, including the cardiac muscle. It amplifies the efficacy of myocardial functioning, bolsters bone density, and contributes to their resilience. Additionally, it serves as a means of curbing obesity, boosting respiratory capacity, aiding digestion, augmenting the production of endorphins, and orchestrating circulatory system balance. Green walking significantly enhances cognitive performance, harnessing the potential of elevated oxygen flow to the brain to stimulate creative thinking abilities [14].

Engaging in regular walking exercises manifests a noteworthy and favorable influence on overall health and well-being, exceptionally when executed within natural settings. The act of walking amidst natural environments encompassing coastal trails, footpaths, parks, forests, and green expanses yields a positive impact on physical health while simultaneously delivering substantial enhancements in psychological well-being. It is well-established that walking amid natural surroundings yields pronounced health benefits. Green walking contributes to cognitive enhancement, stress reduction, and bolstered immunity. It further amplifies concentration levels and promotes clearer thinking. Notably, a study revealed that individuals are more inclined to engage in walking and physical activity when easily accessible green spaces are available [15].

Research indicates that individuals who engage in regular physical activity within natural or green surroundings tend to perform moderate to intense exercises. In comparison to those who exercise indoors on a treadmill, individuals who opt for outdoor exercises demonstrate a heightened inclination to sustain and repeat their activities. Walking within a natural or verdant urban setting elicits

dual benefits, catering to physical and mental well-being. Walking amidst green and natural environments further augments these advantages [16]. Green walking is typically pursued during the spring and autumn months. For summer green walks, it's recommended to establish resting points, opt for shorter routes, and avoid walking during the peak of lunch hours. Adequate mental and physical preparation should precede embarking on a green walking [16].

2.3. Grading the Difficulty of Green Walking

Difficulty Level 1: These trails are suitable for individuals as part of a large or small family. They lack significant slopes, rendering them accessible to all participants.

Difficulty Level 2: These trails extend for no more than 3-4 hours, encompass minimal inclines, and present a minimal challenge.

Difficulty Level 3: These trails might necessitate overnight stays and comprise segments with rugged and narrow pathways, stream crossings, shifts in altitude, and bed crossings. They must be better suited for older people or children who lack proper conditioning.

Difficulty Level 4: These trails demand a comprehensive understanding of weather and seasonal conditions, as well as pre-emptive safety measures. In addition to the third level, these trails necessitate specialized equipment.

Difficulty Level 5: These trails involve exceptionally steep ascents, requiring suitable equipment, substantial experience, navigation skills, and robust fitness levels. Some of these ascents might surpass an elevation gain of 1000 meters.

Difficulty Level 6: These paths constitute extreme courses, recommended solely for seasoned athletes and not suitable for general participants [11].

2.4. Essential Equipment for Green Walking

Backpack: A typical choice is a 20–25-liter backpack capable of accommodating all necessary items. The size should align with the individual's carrying capacity. Considerations while selecting a pack include the presence of chest and waist belts, proper fit against the back, ample compartments, and waterproof capabilities. The availability of fastening mechanisms for items like canteens and mats enhances convenience.

Thermos Flask: A paramount item for keeping both cold and hot liquids readily accessible, making it indispensable for replenishing fluids during breaks in the terrain.

Lantern, Whistle, First Aid Kit: These items are essential components to be included within the backpack for safety and preparedness.

Baton: Opt for lightweight yet durable walking sticks, preferably in pairs. Having two walking sticks helps distribute weight, maintain balance, and facilitate uphill ascents without excessive bending.

Physical inactivity contributes to an increased risk of chronic ailments. Research reveals that regular physical activity substantially enhances health by mitigating the likelihood of hypertension, obesity,

diabetes, CVD, high cholesterol, depression, anxiety, arthritis, neurological syndromes, osteoporosis, and chronic back pain. Moreover, consistent physical activity is associated with reduced chronic obstructive pulmonary disease risks and overall mortality [17].

2.5. Fundamental Guidelines for Green Walking

Team Leader: The individual responsible for making decisions and guiding the group throughout the green walking. They devise the route plan and promptly address any emergent situations during the green walking.

Pioneer athlete: The participant leading the way at the forefront of the green walking. They regulate the pace based on the collective activity level of the participants.

End of the team (Aftershock athlete): Positioned at the group's rear, this participant monitors the group's behavior, maintains effective communication with the leader, issues warnings when necessary, and ensures the smooth progression of the green walking.

Participants (Dec athletes): Encompasses all individuals partaking in the green walking [11].

- Evaluate the appropriate activity intensity level to determine suitable rest break frequency and duration based on the group's fitness levels and existing chronic conditions. Imparts necessary information to all participants ahead of the green walking.
 - Adjusts the pace of the green walking to align with the group's capabilities. If there's a variance in group members' skill levels, the least experienced individual is positioned just behind the leader, and the walking pace is adapted accordingly.
 - A minimum of four participants is recommended for green walking. In case of injury, one person remains with the injured individual while others depart the group to seek assistance.
 - Exercising spontaneous actions and individual behaviors are discouraged during the green walking.
 - Adherence to the leader's guidance and established regulations is mandatory for the entire group.
 - The green walking, particularly under the leadership, is conducted in a single-file formation.
- Out of the 60-minute duration, allocate 50 minutes for actual green walking, reserving 10 minutes for breaks. In challenging terrains, holidays might extend for 15-30 minutes to facilitate controlled breathing.
- While traversing steep terrain (with an incline exceeding 30 degrees), adopt a zigzag (S) pattern to navigate. Avoid unnecessary elevation changes to minimize fatigue and the risk of injury.
 - Maintain complete contact of your feet with the ground to mitigate the likelihood of sprains and fractures.
 - Carry water during the green walking to stay hydrated.
 - Conclude the green walking attentively and composedly to guard against accidents arising from carelessness or haste [18].

2.6. Green Walking for Myocardial Infarction Patients

Substantial evidence attests to the favorable mental, physical, and economic outcomes of exposure to natural environments. Urban residents benefit from enhanced mental well-being and health-related habits by connecting to green urban spaces. Conversely, stress-related disorders are rising among those inhabiting densely populated cities [19]. Spending time in nature improves immune response, mood, and stress reduction. Amplifying physical activity levels positively impacts psychological health, enhances cognitive performance, work productivity, and patient recovery, and mitigates the risk of coronary heart disease and stroke. Such advantageous outcomes can be fostered through active or passive engagement with nature [20]. Embracing natural settings facilitates health-promoting physical activities, often intertwined with social interactions. Nature's influence liberates individuals from daily routines, reducing stress and its adverse consequences on psychological and physical well-being [20].

Some evidence suggests that immersing oneself in natural surroundings is linked to enhanced health indicators, including reduced blood pressure, diminished psychophysiological stress, and a decreased mortality risk [21]. However, the impact of physical activity undertaken by MI patients within green environments on their functional capacities remains inconclusive. MI patients often experience low cardiorespiratory fitness, compromised coronary flow reserve, and altered cardiac autonomic nervous system responses following coronary events. These circumstances necessitate tailored rehabilitation strategies. Strategic physical exertion can counteract these adverse changes, ultimately benefiting the heart. Extended exercise training among post-MI patients engenders a notable rise in vagal tone and post-exercise heart rate improvements. The positive effects of physical activity on hemodynamic parameters, such as resting systolic blood pressure and heart rate improvement in post-MI patients, can be attributed to enhanced autonomic nervous system functioning [22].

An impaired autonomic nervous system can detrimentally impact cardiovascular health. The proper function of the heart is regulated by the parasympathetic and sympathetic nervous systems within the autonomic nervous system. The parasympathetic system's influence intensifies during relaxed and tranquil states, whereas the sympathetic system's power heightens during moments of excitement or stress. The equilibrium between the parasympathetic and sympathetic nervous systems is gauged through heart rate variability, a non-invasive metric of their impact on the heart [23]. In terms of higher time-domain measurements of heart rate variability, a lower heart rate is preferable. Elevated heart rates are linked to an augmented risk of conditions like atherosclerotic plaque progression, congestive heart failure, CAD, stroke, and sudden cardiac death following MI. Notably, regular engagement in physical activity is associated with improved cardiovascular health [24]. Exercise is reported to enhance heart rate parameters in individuals affected by diabetes mellitus, heart failure, and MI, compared to healthy counterparts [25].

Cardiac rehabilitation programs encompass low and moderate-intensity exercises, such as walking. Consistent walking has demonstrated its ability to alleviate anxiety and tension, enhance cholesterol profiles, and regulate blood pressure. It's also associated with decreased systolic and diastolic blood pressure among individuals with hypertension. Interactions between humans and nature yield an array of favorable physiological health outcomes. A recent systematic review and meta-analysis found that engaging with nature correlated with improved heart rate, decreased cortisol production, and a diminished risk of Type 2 diabetes [26]. Research on exercise conducted within nature-based green settings suggests that physical activity in such environments triggers more pronounced improvements in cortisol levels, heart rate, and blood pressure compared to exercise undertaken in urban surroundings. A study examining heart rate among young adult men found that a single session of forest walking led to better heart rate outcomes when compared to a single urban walking session [27]. Engaging in urban walking can contribute to heightened psychosocial stress and increased exposure to environmental pollutants, including air and noise pollution, compared to greener surroundings. These factors can collectively lead to elevated heart rate and blood pressure [28]. Investigating the contrast in cardiovascular responses between green and urban environments holds significance in comprehending the advantages of green walking.

Furthermore, it aids in formulating green exercise recommendations for middle-aged individuals, which can potentially mitigate the progression of cardiovascular diseases. Such inquiries not only elucidate the merits of green exercise but also advocate conserving natural spaces to promote physical activity and community health [29]. In light of nature's established stress-reducing capabilities, mood enhancement, and the documented blood pressure-lowering outcomes of exercise, it is advisable for MI patients to partake in green walking to safeguard their heart health and enhance their overall quality of life [30].

3. Perception of Disease

The perception of illness encompasses the cognitive and emotional responses that individuals exhibit in reaction to their health condition, and it is a component of the Commonsense Autonomy Model [31]. Developed by Leventhal, the Common Sense Autonomy Model outlines a parallel response framework wherein individuals process emotional reactions to illness and cognitive depictions of illness in partly distinct ways. These cognitive and emotional responses subsequently drive certain behavioral adjustments for emotion regulation and improvement. Subsequent to implementing these strategies, individuals evaluate the impact of the illness on their well-being, potentially leading to changes in cognitive status, feedback mechanisms, and emotional responses. The term "disease perceptions" denotes individuals' mental frameworks and personal beliefs regarding the illness they are experiencing [32].

- Heightened perception of the consequences of a disease is correlated with an individual's sense of identity, emotional reactions, anxiety levels, poorer psychological, social, and physical functioning, and unfavorable disease outcomes.
- Enhanced perception of control over the disease corresponds to improved psychological, social, and physical functioning, as well as better disease outcomes.
- Prolonged perception of the duration of the disease is linked to diminished impact dimensions of the disease, worse psychological ramifications, and diminished quality of life [33].

It is widely recognized that these perceptions wield significant influence over health-related behaviors and mental well-being consequences. The perception of illness delves into how an individual navigates life while contending with a disease and how they mentally conceptualize that illness. When faced with illness, the self-perceptions and disease perceptions of individuals often exhibit similarities [34]. This pertains to the cognitive and emotional perceptions that individuals develop as they comprehend the emerging health threat. Such perceptions can encompass both positive and negative beliefs about the illness, subsequently impacting the capacity for perception. This dynamic further influences the ability to effectively manage and cope with the illness [35]. The perception of disease encompasses nine distinct components. Causality pertains to the factors an individual believes contribute to their illness, which can contain biological, emotional, environmental, or psychological factors. Identity involves the label or symptoms associated with the disease. The timeline component delineates how the individual perceives the duration of the illness, the speed of its onset and decline, and whether it is characterized by acute or chronic attributes. Personal control reflects the degree to which patients believe they can influence the course of their illnesses, while treatment control pertains to the role of external factors, such as healthcare professionals, in managing or ameliorating the sickness. Consequences refer to the anticipated impact of the illness on an individual's quality of life and how it might influence various aspects of their functioning, spanning physical, psychological, social, and cognitive domains. Emotional representation captures how the illness triggers emotional responses within the individual. Anxiety denotes the level of anxiety or unease linked to the disease. Lastly, coherence entails the perceived degree of general comprehension regarding the illness [31].

3.1. Components of Disease Perception

3.1.1. Disease Identity

When an individual receives a diagnosis for a particular illness, a belief system gradually forms regarding the signs and symptoms associated with that illness. These signs and symptoms can be subject to varying interpretations, depending on whether the perspective is that of the patient or the healthcare provider overseeing the treatment. Divergent viewpoints about the nature of their illnesses can exist among patients. Within the realm of disease identity, there lies the

essence of identifying oneself as afflicted by the sickness and attributing specific symptoms to it [37].

3.1.2. Perceived Causes

Upon receiving a diagnosis, individuals often ponder the reasons behind the onset of their illness and construct personal beliefs regarding this matter. Patients speculate that negative factors such as dietary habits, sedentary lifestyle, stress, or environmental pollutants might have contributed to the development of the disease. These causal beliefs influence the adjustments they contemplate in terms of managing their conditions, prompting them to explore diverse approaches and treatments. For instance, a patient who has experienced a myocardial infarction might attribute their poor health behaviors as triggers and prioritize transforming these behaviors. Consequently, they might initiate regular physical activity and modify their dietary choices [36].

3.1.3. Temporal Beliefs

Temporal beliefs are closely linked to medication adherence. Patients with chronic conditions tend to be more diligent in adhering to their prescribed medications and treatment regimens compared to those with acute conditions. Individuals with acute conditions may be inclined to discontinue their medications prematurely before the recommended treatment duration has been completed [36].

3.1.4. Beliefs about Control or Treatment

This domain encompasses how individuals perceive their potential for recovery from the disease or their ability to manage it, containing personal and treatment control. It addresses the conviction that an individual has regarding their agency in managing their condition and their treatment's efficacy. Individuals with a shorter temporal outlook often possess a heightened sense of control, actively engaging in their treatment strategies [36].

3.1.5. Consequences

The consequences domain involves the anticipated physical, emotional, and social impacts of the disease on an individual's life, encompassing its potential outcomes and repercussions [36].

3.2. Patient Perspective on Disease Following Myocardial Infarction

During ischemia, the halt in myocardial function arises from a notable decline in the proliferation rate of adult cardiomyocytes (approximately 1 % and 0.45 % annually in individuals aged 25 and 75, respectively) or the demise of cardiomyocytes due to insufficient oxygen and essential nutrients. The cessation of myocardial functioning alone proves inadequate in compensating for the deficit of oxygen and nutrients. This state coincides with the onset of the proliferation process, signifying a gradual deterioration in heart function due to the multiplication of fibroblasts, the emergence of scar tissue, and disruption of the extracellular matrix. Consequently, this sequence culminates in heart failure. Diverse pharmaceutical interventions, ventricular assist devices, artificial hearts, and surgical

revascularization methods are employed to counteract proliferation and decelerate the advancement of heart failure.

Nonetheless, these treatments are incapable of reinstating the function of the impaired myocardium. The primary goal of managing and treating myocardial infarction is to avert complications such as life-threatening arrhythmias, myocardial infarction recurrence, and fatality. This is achieved by addressing ischemia and prioritizing the patient's comfort [38].

The perception of illness encompasses both emotional and cognitive aspects. Emotional illness perception comprises two dimensions: disease consistency and emotional representation. The mental facets of perceiving illness encompass components such as identity, timeline (spanning acute to chronic), causation, control (encompassing personal and treatment management), and consequences [39]. Lifestyle modifications have gained prominence in the recommendations of the AHA and European Society of Cardiology as a crucial element of secondary cardiac protection. Existing evidence underscores the substantial impact of disease perceptions on the health-related behaviors of individuals affected by MI. The dimension of disease perception linked to causation is believed to significantly influence patients' choices regarding adherence to medical advice and the adoption of health-related habits. Notably, those who attribute their MI diagnosis to an unhealthy lifestyle tend to display heightened attention to their diet six months post-discharge and exhibit increased exercise frequency. Furthermore, an elevated sense of personal control over one's treatment has been associated with a more positive attitude toward the management of one's condition, translating into the display of appropriate health-related behaviors [40].

Enhanced personal control among individuals grappling with chronic ailments yields a favorable impact on their adoption of behavioral modifications relevant to their conditions. Consequently, the initiation of interventions geared towards enhancing the individual's disease perception, if executed by the patient, triggers the commencement of alterations in the individual's way of life. These lifestyle adjustments contribute positively to the management of the disease. Notably, the contrast between the perception of emotional illness and cognitive illness leads patients to direct their attention toward their emotional states and engage in heightened monitoring of their emotional reactions. This phenomenon, which tends to postpone the onset of the coping mechanism, amplifies patients' emotional responses and intensifies the severity of their conditions. Consequently, interventions to bolster patients' coping strategies should emphasize the perception of cognitive illness over the subjective comprehension of emotional illness [41].

4. Quality of Life

The concept of life quality pertains to "how an individual perceives their aspirations, benchmarks, anticipations, and matters of importance within the context of their prevailing value systems and cultural milieu" [42].

4.1. Life Quality Among Myocardial Infarction Survivors

The foremost determinant influencing an individual's evaluation of their personal health, situated within their sociocultural context, encompasses both their physical and psychological well-being. Given the extension of life expectancy, the matter of life quality has gained substantial prominence in contemporary times. Recommendations for individuals to mitigate physical and psychological health vulnerabilities and foster a wholesome existence encompassing dietary choices, physical engagement, sufficient repose, amplification of intrinsic motivation, and engagement in leisurely pursuits. These approaches serve to curtail health risks and augment the individual's contentment with life, consequently elevating life quality [43]. In a clinical context, life quality intersects with prevalent conditions like cardiovascular disease, diabetes, hypertension, dyslipidemia, and obesity. Hence, clinical and epidemiological inquiries predominantly spotlight the physical health dimensions of life quality, examining individuals' perceptions of their living circumstances amidst ailment and the extent of meaningful life they can lead [44]. MI contributes to 27 % of total fatalities within Europe, resulting in approximately 1.8 million annual deaths. Forecasts indicate an anticipated 18 % surge in MI prevalence from 2013 to 2030. A significant proportion of fatalities and hospital admissions are attributed to MI. In most instances, surgical procedures or percutaneous revascularization lead to symptom amelioration and reduced mortality rates [45]. Pharmacological treatments also hold a pivotal role in symptom management, particularly among patients for whom revascularization isn't viable. Adherence to prescribed medication regimens underscores patients' agency in dealing with their conditions. Sustaining medication schedules manifests their sense of control over the affliction. Post-MI shifts in life quality are a notable gauge for prognosticating the emergence of subsequent ailments [46].

Following MI, ventricular dysfunction ensues, stemming from the loss of contractile mass, consequently ushering heart failure among individuals with extensive myocardial impairment. Ventricular dysfunction prompts physical inactivity due to the emergence of symptomatic indications like dyspnea, fatigue, and weariness. This circumstance contributes to a dip in health-related life quality. Individuals encounter challenges in reclaiming their previous living standards and pre-MI quality of life [47]. About 25 % of patients grapple with compromised life quality alongside heightened levels of anxiety and depression. As a result, the post-MI hospital discharge process assumes a pivotal and intricate character. Alterations in life quality serve as predictive markers for mortality and cardiac incidents in MI patients [48].

The American Heart Association has delineated eight determinants influencing cardiovascular well-being, categorized into two primary domains: health behaviors and health factors. Health behaviors encompass adopting a balanced diet, abstaining from smoking, enhancing physical activity, ensuring restful sleep, and maintaining a healthy BMI. Health factors encompass weight management, blood glucose regulation, cholesterol modulation, and blood pressure

control [49]. A comprehensive meta-analysis encompassing 13 studies of individuals diagnosed with MI and five studies involving patients after CABG surgery has unveiled that perceptions of illness, health behaviors, and health outcomes (encompassing life quality, return to work, in-hospital complications, participation in cardiac rehabilitation, etc.) are also implicated. It has been determined that the elements of emotional portrayal and self-identification are linked to diminished life quality among patients with conditions such as chronic obstructive pulmonary disease or those who have undergone CABG surgery [37].

Post-discharge, it has come to light that the recurrence of hospitalizations among MI patients experiences an upsurge due to suboptimal life quality [47]. The critical nature of the ailment, the necessity for enduring lifestyle transformations subsequent to MI, and medical interventions collectively culminate in a decline in the life quality of these individuals. Assertions have underscored that the life quality of individuals who have experienced an infarction can experience enhancement through well-suited and efficacious interventions. Adherence to medications and the adoption of lifestyle adjustments bearing on life quality have been identified as pivotal recommendations for diminishing risk among MI patients [47].

Conclusions and Recommendations

Promoting favorable health behaviors is essential for both preventing recurrent MI and enhancing life quality among patients. A pivotal factor contributing to heightened life quality and prolonged life

expectancy is the pursuit of lifestyle adjustments. The provision of sustained care, facilitated by healthcare professionals, aids individuals in managing the intricacies of lifestyle changes, adapting to novel treatments, and navigating reorganization processes. This particular patient cohort faces an elevated susceptibility to potential cardiac events, necessitating a strong focus on secondary prevention measures. Comprehensive secondary prevention encompasses educating patients about symptom control, consequently enabling the management of risk factors. Furthermore, effective management of post-MI complications hinges on vigilant regulation of blood pressure, glucose levels, lipid profiles, tobacco consumption, and alcohol intake, alongside the cultivation of lifestyle modifications such as physical activity and nutritious dietary habits. To create a positive perception of the disease in patients who have undergone MI within the scope of nursing practices and to improve their quality of life, it is recommended that MI patients take regular green walks.

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Authors' contributions

All authors have taken an equal role in the design, literature review and writing of the review article.

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