The effect of anxiety on adults on the likelihood of developing coronary heart disease

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Abstract

Cardiovascular diseases are a leading cause of death in humans, with mortality rates far exceeding those of other diseases. A number of studies have identified a link between anxiety and coronary heart disease, with anxiety emerging as a risk factor for its occurrence as well as the patient's outcome due to heart failure. The purpose of this study is to find literature references that explore the occurrence of anxiety symptoms in middle-aged and older persons in conjunction with the occurrence of coronary heart disease.

Keywords

Anxiety, cardiovascular diseases, effects

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Introduction

Cardiovascular diseases are a major cause of death in humans, with rates being higher than other diseases. Findings from studies have suggested a reduction in the incidence of cardiovascular disease by controlling human exposure to certain risk factors, with smoking and hypertension predominant among them [1]. The association between anxiety and coronary heart disease is found in a number of studies, with the emergence of it as a risk factor for its occurrence, as well as the outcome of the patient due to heart failure [2, 3]. The present study attempts to identify literature references that examine the occurrence of anxiety symptoms in combination with the occurrence of coronary heart disease in middle-aged and older adults. The aim of this study is to clarify the possible correlations of the presence of seizures with the development of coronary heart disease in an effort to highlight anxiety as a major risk factor in its occurrence, through the presentation of the findings of recent research studies. This is a subject of increasing interest in the field of Health Psychology, because, despite the suspicion of a connection, the causal relationship between the two remains unknown, drawing the scientific community's attention.

Methodology & Search strategies

The literature review was based on articles searched in the PubMed, Medline, Scopus, Springer Link, and Science direct databases and published between 2011 and 2022, with the main concern being the incorporation into the present study of possible recent research approaches. The main restriction was to find articles in English, in order to be able to read and understand them. The selection of literature references in the present review was based on the report of the recording of anxiety symptoms in middle-aged and elderly people and the occurrence of coronary heart disease in them, but without including minor differences regarding the exact manifestations of the recorded anxiety. Specifically, the corresponding studies were attempted by looking for the manifestations of anxiety, either as a form of anxiety disorder or as a form of increased anxiety symptoms, and their association with the onset of coronary heart disease in adults without a previous history of cardiovascular disease.

The following keywords were used in the search: "anxiety", "anxiety disorder", "coronary heart disease", "anxiety symptoms and coronary heart disease" as well as various combinations of the above. The choice of index words was based on the wording of the present review in order to include as many relevant studies as possible. The use of indexing words in combination was attempted with the aim of the highest possible correlation with the subject under study. The search of the studies in the databases was carried out in the period from November 20, 2021, to December 17, 2021, devoting a large period of time to locating and selecting which of them are presented in the present research approach. The review of the studies was attempted through their categorization, according to their main elements, such as the diagnostic protocol that was applied to assess the levels of anxiety, but also the quality of life of patients before the onset of coronary heart disease, focusing on their mental health. The exclusion criterion was the reference to other diseases, apart from coronary heart disease, in an attempt to clearly associate the symptoms of anxiety with the specific cardiovascular disease.

Results

Specifically, through the search process in the selected databases, the identification of the main studies was initially achieved based on the keywords that have been entered, leading to the selection of 32 studies. At the same time, an attempt was made to gather other studies such as reviews and sources of primary studies, resulting in the finding of an additional 22 studies.

The duplicate studies were then removed after a thorough review of the abstracts and their titles, leaving 38 studies. Also, 11 studies were excluded as not relevant to the research topic and the purpose of this work. 27 studies were then evaluated, which based on the text remained, while 22 were the studies that were finally excluded. More specifically, out of the 27 appropriate studies, 7 studies were removed as non-epidemiological and 9 studies as meta-analyzes or reviews. Finally, 6 studies were excluded due to the fact that they examined old reviews. Specifically, in the present review, out of the total of 54 studies, the 5 studies were included, which seem to have sufficiently met the necessary criteria that have been set as a selection.

The results of the research show the levels of correlation of anxiety regarding the occurrence of coronary heart disease in middle-aged and elderly people, without the previous emergence of cardiovascular diseases. These indicate a high correlation of the individual's anxiety levels with the likelihood of developing coronary heart disease, a point which should raise the interest in the field of Health Psychology.

The presence of psychosocial pressures is considered a key risk factor for coronary heart disease according to a recent study [4], which attempted to document the relationship between anxiety during daily life and the insidious risk of developing coronary heart disease. This study monitored the health of 237,980 men, utilizing information from health system databases in Sweden. The recording of anxiety levels was performed by assessing it by performing a psychometric test by a specialized professional. Of all the participants, 10,581 were diagnosed with coronary heart disease at some point in their lives. Data on coronary heart disease rates were based on national health records from 1969 to 2010. The occurrence of high levels of anxiety during a person's lifetime was associated with an increased risk of developing coronary heart disease. This study also reveals the link between increased anxiety levels during adolescence and the high risk of coronary heart disease in middle age.

Similarly, another study [5] captured the association of anxiety with an increased risk of coronary heart disease. A total of 3135 participants in the US were surveyed using anxiety levels using the Goldberg Anxiety and Depression Scales. During the re-examination after 12 years, 612 cases of coronary heart disease were identified, with anxiety being significantly correlated with their occurrence. At the same time, however, the researchers concluded that effective stress management can help prevent

coronary heart disease, a particularly encouraging point.

Correlations between the presence of anxiety disorders and the occurrence of coronary heart disease, as well as their significant contribution to the increase of mortality of this disease, are proven through the study by Kemp [2]. It involved 15,105 people in 6 major urban centers in Brazil aged 35 to 74 years from 2008 to 2010. The presence of anxiety symptoms was significantly associated with an increase in the incidence of coronary heart disease. The correlation of coronary heart disease is higher in people with symptoms of anxiety psychosis, but without downplaying the clear relationship between daily anxiety and the onset of the disease. The diagnosis of the psychological condition of the participants was made based on the assessment scale Clinical Interview Schedule-Revised and by conducting interviews with the participation of specialized health professionals. When assessing participants' levels of psycho-emotional health, a set of disorders such as phobias, panic disorders, social disorders, and anxiety disorders were approached. The increased rates of chronic stress found in the participants were attributed to the changing social living conditions in Brazil and the emergence of various challenges, mainly in the socio-economic sector. Through this study, the increased correlation of anxiety with the increase of the probabilities of coronary heart disease was identified, with clear effects on the viability of the individual.

The correlation between ischemic events and the emergence of anxiety was approached in a recent study [3] in which 291 people participated, with a mean age of 66.8 ± 8.7 years, of which 45% were women. The assessment of anxiety levels was performed utilizing a properly structured questionnaire. This study concluded that psychosocial factors, such as anxiety symptoms, were clearly associated with an increased risk of coronary heart disease. In addition, it was attempted to assess the racial differentiation of the severity of the manifestations of the disease, due to the discernible intensity with which the two sexes express their anxiety. At the same time, it was examined whether there are differences in the probability of developing coronary heart disease based on age. Findings revealed that psychosocial disorders, such as stress, are associated with gender and age, with the result that the risk of coronary heart disease is higher in women and people over 65, due to increased anxiety records.

In order to investigate a particular form of anxiety, another recent research [6] attempted to capture the association of health anxiety as a risk factor for coronary heart disease. The incidence of coronary heart disease was studied with the participation of 7,052 people from Norway over a period of 12 years (from 1997 to 1999), with the assessment of stress-related manifestations of health being recorded through the Whiteley Index. Through the implementation of appropriate statistical analyzes and the use of regression models but also from the comparison of risk factors for the onset of cardiovascular disease, it emerged that health anxiety is to blame for almost 70% of the recorded cases. The findings of this study are considered particularly interesting as they raise a clear correlation between anxiety as a risk factor for coronary heart disease, one of the leading causes of mortality worldwide. Detection of elevated levels of anxiety in the individual should be an indicator of concern, with the aim of optimally managing and controlling early signs of serious physical illness.

Conclusions

Psycho-emotional disorders such as stress have been implicated in the possibility of developing cardiovascular disease and in particular coronary heart disease. A set of studies attempts to approach the contribution of anxiety to the induction of coronary heart disease through which the toxic role of this negative emotion in the manifestation of the specific disease is captured. According to the results of the selected studies, the importance of the manifestations of psycho-emotional disorders at the level of the individual's physical health is considered high, and in particular, the correlation of anxiety with the occurrence of coronary heart disease is proved. These findings demonstrate the urgent need for Health Psychology professionals to be involved in optimal anxiety management in an effort to control the incidence of serious cardiovascular disease. Health professionals are required to achieve their appropriate specialization in the field of early detection of anxiety symptoms, as well as their management, with the main concern of protecting the cardiovascular health of their patients.

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