Quality Of Life For Patients With Myocardial Infarction: Article Review

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Abstract

Back ground and objective: Myocardial infarction is sudden blockage of coronary artery, result in damage to the surrounding heart muscle. Quality of life it's a situation with wide variety, which is influenced Physical wellbeing, psychological condition, in a nuanced way, personal beliefs, social relations and relations with other persons in the environment. The aim of the study was to assess quality of life domains in patients with Myocardial Infarction.

Method: A literature search and selection of peer-reviewed and professional journal publications were conducted, Eastern Mediterranean Health Journal, Zanco J. Med. Sci, The Medical Journal of Basrah University, Medico-legal Update, Arch Argent Pediatr. Were found in PubMed, and Google Scholar databases to capture a comprehensive list of peer-reviewed studies published between 2007 and 2020.

Results: The present article review concluded that the study showed most of the participant age were (53-65) years, and more than half of them were males, illiterate, married and mostly came from urban with half of the patients were retired.

Most of the patients were smoker, have family history of myocadiac infarction with high level of cholesterol, mostly have hypertension and diabetes mellitus.

The present study revealed that quality of life affected in patient with myocardial infarction. There were very highly significant association between patients age, education, occupation

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and Quality of Life Domains.

Conclusion: significant relationship between myocardial infarction and age groups (53-65) years, males, illiterate, married, smoker, have family history of myocardial infarction with high level of cholesterol, mostly have hypertension and diabetes mellitus.

Keyword : Quality Of Life , Myocardial , infarction patients

Introduction

Coronary heart disease is a major and significant public health problem myocardial infarction myocardial infarction is a A life threatening disease characterized by the development within the myocardium of localized necrotic areas. Coronary artery occlusion is the most frequent cause of myocardial infarction (MI). usually precipitated by rupture of vulnerable atherosclerotic plaque and subsequent thrombus formation and the incidence of myocardial infarction is dependent upon predisposing risk factors for atherosclerotic coronary artery diseases such as: hyperlipidemia, diabetes mellitus, hypertension, smoking, male gender and family history of coronary artery diseases (Braunwalds, 2005 and Smltzer et al, 2008). Myocardial infarction is multifactorial, progressive and complex disease in which the part of the heart muscle suddenly loses its blood supply (Clark M J., 2008).

Myocardial infarction

myocardial infarction is a complication of coronary heart disease which is preventable. Various life style factors such as smoking, lack of exercise and unhealthy diet are risk factors of atherosclerosis and physiological factors such as high lipid level, high blood pressure and diabetes mellitus are also risk factors (Braunwald, 2012). Classical myocardial infarction signs include shortness of breath, acute chest pain usually radiating to the left side of the neck or left arm, nausea, diaphoresis, or generalized sweating, fatigue, palpitations, and imminent doom or anxiety. (Allender J., Spradeley B. (2005).

Studies have consistently reported that patients with myocardial infarction experienced poor health quality of life, and factors associated with this include age (Hawkes et al., 2013; Wang

et al., 2014) gender, education level (Wang et al., 2014), and anxiety and depression (Hawkes et al., 2013; 2005; Rejai et al., 2012‹Wang et al., 2014).

Myocardial infarction is the leading cause of death in about one third of people in the world, about 80% of these deaths occur in developing countries. More than 1 million individuals each year in the United States suffer from myocardial infarction (Neyer, 2007) In Egypt the incidence of coronary artery diseases are 4.41 /1000 as a result of international data base (2005). In Coronary Care Unit of Assiut University Hospital the number of admitted patient during the year 2006-2007 was 2400

patients with coronary artery diseases 387 of them were diagnosed as having myocardial infarction.

Importance of the study

Quality of life for the World Health Organization described quality of life as the understanding of an individual's role in life in the sense of the cultural and value structures in which they live and in relation to the objectives, aspirations, standards and concerns. In a complicated manner, its definition abroad affected by persons physical psychological state, social relationship (Hoykstra *et al*, 2013).

Myocardial infarction myocardial infarction is a CHD is a typical clinical manifestation which typically results in substantial patient distress impacting their health-related quality of life (Wang et al, 2008).

Several clinical studies have shown that myocardial infarction causes a decrease in the physical social and psychological functioning of affected patients, affecting health quality of life patients and can affect the capacity of the patient to perform even daily tasks (Simpson and Pilote, 2005) .

Objectives of the Study:

A-General objective:

To assess the Quality of Life among the adult Patients with Myocardial Infarction.

B-Specific objectives to:

Identify socio-demographic characteristics of patients with myocardial infarction

Find out the relationship between demographic characteristics and quality of life domains of patients with myocardial infarction.

Review of literature

Epidemiology

Coronary heart disease alone caused ≈1 of every 6 deaths in the United States in (2010) 379 559 Americans died of chronic heart disease. One American has a coronary incident about every 34 seconds, and American die about every 1 minute 23 seconds. (Alan *et al*, 2014).

The trends between 1975–88 In addition to aggregate trends, the significance of analyzing age and sex-specific patterns was underlined. Indeed, greater decreases in the incidence of myocardial infarction among elderly people have been noted. individuals along with an increase in incidence among some but not all age groups (Veronique *et al,* 2011).

Myocardial infarction definition:

Myocardial infarction definition is complex and progressive disease in which the part of heart muscle loss it blood supply (Clark M J., 2008).

A-Modifiable risk factors :

Smoking :

There is overwhelming evidence that smoking has had an adverse health effect. Smoking accounts for 50 per cent of all preventable deaths by long-term smokers. and one half of these are due to CVD (

Graham *et al*, 2007).

High blood lipid

The lipoproteins carry cholesterol in the blood which consist of LDL and HDL accumulate in the arteries and increase level of cholesterol in the blood that causes atherosclerosis (Guisseppe *et al*, 2016).

Alcohol intake

Alcohol use was implicated as a cause in >2.5 million deaths worldwide in 2010, cardiovascular disease, and was ranked the fifth most important risk factor contributing to the The global disease burden increased the risk of Myocadiac infarction (Darry *et al*, 2014).

Physical inactivity

At levels lower than the minimum recommended number, physically active also had significantly lower levels risk of coronary heart disease (Sattelmair *et al,* 2011).

Diabetes Mellitus

Up to 20% of patients with myocardial infarction myocardial infarction without known diabetes experience hyperglycemia during their hospitalization., at rates even higher than patients with hyperglycemic myocardial infarction with known diabetes. Diabetes Meletus damage blood vessels including coronary of the heart (Supriya *et al*, 2014).

Hypertension

Hypertension is one of the risk factors that

caused by hardening of the arteries and loss of elasticity that result in myocardial infarction hypertension occurs when the systolic blood pressure is more than 140 mmhg and the diastolic blood pressure is more than 90 mmhg elevated blood pressure is controllable by medication and diet Hypertensive BP were associated with an increased risk of myocardial infarction. Blood pressure is the force that a person's blood exerts against the walls of their blood vessels. This pressure depends on the blood vessel resistance and how hard the heart has to function. To cope with stress, people should avoid consuming alcohol, recreational drugs, cigarettes, and fast food, as these may lead to elevated blood pressure and hypertension complications. Blood pressure may be raised by smoking. Avoiding or quitting smoking reduces the risk of hypertension, serious heart conditions, and other health issues. Nearly half of all adults in the United States have high blood pressure, but this fact is not understood to many. (Nies M and McEwen M,2001).

Stress

Stress stimulates nervous system and causes the vessels to constrict which lead to increase blood pressure and patient with high stress lead to produce of body cholesterol stress stimulate the sympathetic nervous system. For many patient stress management technique, such as exercise, relaxation technique

medication useful in controlling blood

B-Non modifiable risk factors

Gender
Myocardial infarction more frequently observed in men, female gender was associated with a smaller infarct size than that in men genetic predisposition is an important factor in the occurrence of myocardial infarction (Farhouh, 2013).

Family history
Family history of myocardial infarction, it is an independent risk factor. Several genetic variations in a first-degree relative double myocardial infarction risk are associated with increased risk of myocardial infarction and family history of myocardial infarction. (Mattis *et al*, 2015).

Clinical manifestation Myocardial infarction
Chest pain described as severe sharp, heavy, burning sensation which locates in the epigastric region and radiates to the jaw, shoulders and arms the myocardial infarction not relived by nitrate or rest and may lasts for 20 minutes (Russell, 2016).

-Prevention of MI

a. Control Hypertension

Lifestyle modifications should be initiated in all patients with hypertension and they should be assessed for target organ damage and existing cardiovascular disease. Self-monitoring is recommended for most patients in their treatment, and requesting and checking readings from home and community settings will help

pressure (Meister, 2013) .

the practitioner assist the patient in gaining and retaining good control. Specific drugs should be considered as first-line therapies for patients with hypertension in conjunction with certain clinical conditions. Consume no more than 2,400 mg/day of sodium. It is advisable to further reduce sodium intake to 1,500 mg/day, as this is associated with an even greater reduction in blood pressure. Reduce the consumption of sodium by at least 1,000 mg/day, as this decreases the blood pressure. Left ventricle hypertrophy is both concentric and eccentric, and it is normal to have diastolic dysfunction. Left ventricular volume is often increased when obesity is present but systemic hypertension is absent, but wall stress typically remains normal. However, changes in stroke volume and cardiac performance as well as diastolic dysfunction are seen in obese patients without hypertension, (K.Park ,2015).

c.   Smoking Cessation
Smoking cessation at present, quit rates for smokers after myocardial infarction are higher than those for the general population of smokers, And, considering the huge health risks, they are still way too poor. A combination of therapy and customized drugs with a chronic disease treatment strategy would likely require growing quit rates. (Benowitz and

Prochaska, 2013) .

d. Reduced saturated fat and cholesterol

The reduction of the cardiovascular risk of decreasing the consumption of saturated fat by replacing energy from saturated fat with polyunsaturated fat appears to be a useful technique and carbohydrate replacement appears to be less helpful, but the results of replacement appear to be less helpful due to the inclusion of only one limited trial lifestyle guidance for all those at risk of cardiovascular disease, monounsaturated fat was vague and population groups at lower risk could continue to require permanent reduction of dietary saturated fat and partial substitution of unsaturated fat (Hooper, 2015).

e.Maintain healthy weight

Patient engagement in management is critical, as for any chronic disease. Treatment needs to be evidence-based and centered not just on weight, but on a wide variety of health outcomes. Usage of extremely low energy diets, pharmacotherapy and bariatric surgery can be used in intensive procedures to potentiate weight loss. Where available, referral to specialist weight assessment and management clinics may be advisable, particularly in complex cases with more serious co-morbidity. (Mariee and John , 2013).

e. Avoid stress

Posttraumatic Stress Disorder can occur in patients following exposure to a life-threatening illness. After myocardial infarction, approximately one out of six patients experience clinically significant levels of Posttraumatic Stress Disorder symptoms. Posttraumatic stress disorder symptoms are associated with impaired quality of life and the risk of recurrence increases. cardiovascular events (Rebecca *et al*, 2013).

-Quality of life

The concept of health and wellbeing is a subjective one. The patient's own perspective and assessment of his or her quality of life are an important parameter for assessing health outcomes, efficacy, and economic impact of interventions (Sinha *et al*, 2013).

Quality of life assessment comes to the fore in patients with incurable progressive diseases, which oblige them to adhere to regimens restricting their daily lives (Gurkova, 2011). Several clinical trials have shown that mesocardiac infarction induces a reduction in the social and psychological physical functioning of the patients affected. These changes influence the quality of life of the patient and can affect the capacity of the patient to perform even simple everyday tasks. (Simpson & Pilote, 2005).

World Health Organization, Quality of life defined as "individuals' perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations,

standards and concerns" American Heart Association (2005) stated that, Quality of life includes the persons physical health, psychological state, level of independence, social relationships, personal beliefs and patient' relationships. Quality of life measurements aim to and used as an outcome measure and designed to evaluate the quality of care, determination of therapeutic benefit and provide valuable information to all members of the health care team and forming the basis for counselling patients (Norekval *et al*, 2007).

Myocardial infarction patients facing many problems which affect their quality of life, these problems can be overcome and controlled with adherence to life style modification and therapeutic regimen. Modification of lifestyle and cardiac rehabilitation after myocardial infarction is essential because of the relatively high risk of recurrence and the need for long modification of life styles and risk factors post- myocardial infarction (David 2005, and Graham, 2007).

health quality of life applies not only to the personal health status of people, but also to their physical and mental conditions, as well as psychological variables such as social and functional relationships and their level of freedom. (Samartzis *et al*, 2013).

Psychological Domain

Prevalence of anxiety and depression in patients with myocardial infarction varies,

but it is well recognized that the first few weeks of home convalescence is a stressful experience around half of these patients reportedly experience depression and anxiety during this period (Moser *et al*., 2007).

Social support

Perceived social support and stressful life events have independent significant effects on health quality of life in patients. This is especially important in female patients in whom both physical and psychological domains were associated only with social characteristics, especially with perceived social support. Low social support is associated with poorer outcomes among cardiac patients (Lett *et al*, 2005), social support follows the infarction trajectory, which attains the family members and favors the support according to the needs of care in each lived moments by the patient (Garcia *et al*, 2005).

Physical domain

This suggests that an essential part of HRQL does not respond to changes in the presence or degree of chest pain in such patients. This suggests that an essential part of HRQL does not respond to changes in the presence or degree of chest pain in such patients. A shift in non-cardiac morbidity may be one potential confounder. However, the findings were not altered by a separate review excluding patients contracting co-morbidity during the study. The multidimensional build of HRQL may be the explanation for the

unresponsiveness. As listed in the table. This suggests that the reduction of symptoms of chest pain is not adequate to increase the quality of life of patients with coronary artery disease linked to health. (Kiessling *et al*, 2007).

Level of independence domain

In patients with myocardial infarction, muscle strength, mobility and quality of life affect functional strength and gait training (Herman, 2016). In the loss of mobility, decreased muscle strength in the lower extremities may be a significant factor. This restricted versatility requires a wide variety of daily operations.. Limited mobility can have a large impact on the independence of an 3 4 individual once basic daily activities such as rising from a chair, walking stairs and doing groceries are impaired. The loss of independence and inability to perform in social roles will have a negative effect on the health quality of life. The loss of muscle strength and mobility and the social isolation can negatively influence each other (Wachelder *et al,* 2009) .

Spiritual domain

To evaluate the relationship in cardiac patients between faith, coping, and quality of life. Life-threatening and traumatic incidents, such as myocardial infarction myocardial infarction, can lead to a real crisis that affects patients both physically and spiritually, mentally and socially.

However, the Physical needs are the priority of health care professionals. In addition, in light of our cultural background, the spirituality of patients suffering heart attacks. The aim of this research is to examine the spiritual experiences of myocardial infarction survivors. (Marzieh *et al*, 2016).

Methods and material:

Data sources. A literature search and selection of peer-reviewed and professional journal publications were conducted, Eastern Mediterranean Health Journal, Zanco J. Med. Sci, The Medical Journal of Basrah University, Medico-legal Update, Arch Argent Pediatr. Were found in PubMed, and Google Scholar databases to capture a comprehensive list of peer-reviewed studies published between 2007 and 2020.

Search terms and search strategies (key words).

Quality of life, Myocardial infarction, Coronary heart disease, Ischemic heart disease

Selection criteria of the articles (inclusion/exclusion criteria).

Inclusion criteria:

1-Articles consist the patients with Myocardial infarction.

2- Articles consist the patients with all ages.

3- Article studies published between 2007 and 2020.

Exclusion criteria:

1- Articles consist the patients without Myocardial infarction.

3-Article done below date 2007 and above 2020.

The number of studies screened and the number of studies included.

The number of studies screened are fifteen.

The number of studies included five articles done among patients without Myocardial infarction, four articles of them done in. Articles done between (2007-2020).

Results: The current article reviews study followed five article who are this review used some direct observation Prevalence of the study population consisted of 74 consecutive patients with acute MI, admitted to the Causality Department of the Surgical Specialty Hospital, Cardiac Center, within 12 hours of the onset of clinical signs and symptoms from March to May 2018. Most common risk factors in Iraqi patients with acute myocardial infarction. The findings of this study conclude that AMI occurs in older age and in male gender among Iraqi population, and ST-elevation myocardial infarction is the main presentation. Hypertension, hyperlipidemia, and smoking are the major risk factors. This study shed light

on the primary prevention and control of these cardiovascular risk factors for CAD through healthy lifestyle, increased physical activity, and healthy dietary choices, which can reduce the prevalence of CAD. (Amen S. Othman et al ,2020).

The second article who Prevalence and Assessment of Severity of Depression Among Ischemic Heart Disease Patients Attending Outpatient Cardiology Department Baghdad Teaching Hospital, Baghdad, Iraq done by Al-Abbudi S.Joodah et al, shows high prevalence of depression (45.1%) among out-patient ischemic heart disease patients. Depressed ischemic heart disease patients were of statistically significant correlation with age, sex, marital status, occupation, education, income, and duration of ischemia, comorbidity with other illnesses, cardiac surgery, and stressful life events. With lack of mental health services, this issue is more important for the general practitioners and cardiologists to understand the importance of risks of untreated depression in ischemic heart disease patients. Complicating this picture is the prevailing social stigma associated with mental illness in Iraq (Al-Abbudi S.Joodah,2017).

The third article who Growing Epidemic of Coronary Heart Disease in Low- and Middle Income Countries done by Gaziano et al. (2009) The trends in risk factors suggest the problem is only going

to continue to grow in the near term. Nonetheless, viable solutions to curbing if not reversing the epidemic exist. The reduction in the disease burden will require changes at the policy level as well as at the personal level. From societal perspective efforts to improve lifestyle choices such as tobacco control strategies will be paramount. At the personal level strategies to assess risk will need to be simplified as well as the treatment modalities employed. Further, alternative uses of allied health workers such as community health workers will need to be evaluated given the reduce human resources in most developing countries. Gaziano et al. (2009).

The fourth article was Considering Both Health-Promoting and Illness-Related Factors in Assessment of Health-Related Quality of Life After Myocardial Infarction done by Eva Brink (2012). Disease-related factors were more closely correlated with health quality of life one year after myocardial infarction than were health-promoting factors. Fatigue was an important predictor of health quality of life, which was interpreted as having the following clinical implications: when, due to fatigue, a person does not meet the requirements of daily life, This must first be answered. Obviously, it is time to take seriously the issues of patients suffering from post-myocardial infarction exhaustion. Developing and assessing fatigue relief

policies in cardiovascular nursing and examining them in intervention trials are of critical importance. This does not preclude engaging in health-promoting variables in coronary care procedures, such as a sense of coherence. Interventional methods that focus on both disease-related and autogenetic variables may be optimal. This is a topic for further review. (Eva Brink ,2012).

The fifth article showed was Health-related quality of life and its associated factors in Chinese myocardial infarction patients who presented that Myocadiac infarction patients, as measured by both generic (SF-36) and disease-specific instruments, reported poor health-related quality of life. Advancing age and the prevalence of heart disease, anxiety, and depression were major predictors of overall Health-related quality of life Smoking and hypertension were significant predictors of the physical aspects of Health-related quality of life (Wang et al ,2012).

The study showed most of the participant was illiterate, married and mostly came from urban with half of the patients were retired, smoker, have family history of Myocadiac infarction, high level of cholesterol, hypertension and diabetes mellitus. The present study revealed that quality of life affected in patient with myocardial infarction. There were very highly significant association between patients age, education,

occupation and Quality of Life Domains.

Conclusions and Recommendations:

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The present article review concluded that the The study showed most of the participant age were (53-65) years, and more than half of them were males, illiterate, married and mostly came from urban with half of the patients were retired.

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The present study revealed that quality of life affected in patient with myocardial infarction. There were very highly significant association between patients age, education, occupation and Quality of Life Domains.

Recommendations:

Continuous increasing knowledge of patients with myocardial infarction causes modifiable risk factors to reduce complication.

Education of the myocardial infarction patient by both staff nursing and the physician with information about the management of symptoms and the prevention of recurrence provides a sense of empowerment associated with changes in behavior and decreased anxiety, increases patient's satisfaction and decrease in mortality and morbidity. Increase patient's awareness about the myocardial infarction using booklet, illustrated pamphlets with simplified language and posters should be provided for each patient with myocardial infarction before discharge to reach optimal level of quality of life. Further research is needed in order to identify quality of life and to investigate whether the level of quality of life changes during the course of illness and strategies for enhancing patient's adherence to new life.

References

Abdel- Gaber.M (2005). A plan of discharge for cardio-thoracic surgery patients Nursing Science, Faculty of Nursing; Ain Shams University:59-99. [Internet]. Available .from: https://www.researchgate.net/publication/284032151_Effect_of_Discharge_Planning_on_Patient_with_Cardiac_Surgeries_Regarding_Compliance_towered_Therapeutic_Regimen

Al-Abbudi S.Joodah,Faris, Hassan Lami and Wady Z. Abd (2017) .Prevalence and Assessment of Severity of Depression Among Ischemic Heart Disease Patients Attending Outpatient Cardiology Department Baghdad Teaching Hospital, Baghdad, Iraq . J Psychiatry, an open

access journal. Volume 21 • Issue 2 • 1000438. ISSN: 2378-5756.ppt 2 [Internet]. Available .from: https://www.longdom.org/open-access/prevalence-and-assessment-of-severity-of-depression-among-ischemic-heartdisease-patients-attending-outpatient-cardiology-departmen-2378-5756-1000438.pdf

Alan S. Go; Dariush Mozaffarian, DrPH, FAHA;Veronique L. Roger, MPH, FAHA; Emelia J. Benjamin, ScM, FAHA; Jarett D. Berry, MD, FAHA; Michael J. Blaha; Shifan Dai; Earl S. Ford, MPH, FAHA; Caroline S. Fox, MD, MPH, FAHA; Sheila Franco, ;Heather J. Fullerton, MAS; Cathleen Gillespie, ; Susan M. Hailpern, ; Heart Disease and Stroke Statistics—2014 Update A Report From the American Heart Association. [Internet]. Available .from: https://www.ahajournals.org/doi/10.1161/01.cir.0000441139.02102.80

Ali Ahmadi, Arsalan Khaledifar, Homeira Sajjadi and Hamid Soori Relationship between risk factors and in-hospital mortality due to myocardial infarction by educational level: a national prospective study in Iran Ahmadi et al. International Journal for Equity in Healt Mjbu, Vol 22, No. 1&2 .Available from http://www.equityhealthj.com/content/13/1/116

Allender J., Spradeley B. (2005). Community Health Nursing and the protecting the public health. 6 th edition.

Philadelphia: Lippiontt Williams and Wilkins: 405, 841-845.

Amen S. Othman , Baban S.Tharwat, Yousif S.Hassan, Hawez A. Himdad, Baban Z. Tharwat, Fateh D. Mustafa(2020). Risk Factors in Iraqi Patients with Acute Myocardial Infarction The study population comprised 74 consecutive patients with acute MI, admitted to the causality department of the Surgical Specialty Hospital – Cardiac Center. Medical Journal of Babylon ¦ Volume 17 ¦ Issue 1 ¦ January-March . [Internet]. Available .from: https://www.ejmi.org/pdf/Risk%20Factors%20for%20Acute%20Myocardial%20Infarction%20A%20Review-76486.pdf available at https://www.ncbi.nlm.nih.gov/pubmed/21810663

Benowitz, N.L. and Prochaska, J.J. (2013) Smoking Cessation after Acute Myocardial Infarction. Journal of the American College of Cardiology, 61, 533-535.

http://dx.doi.org/10.1016/j.jacc.2012.11.017

Berg J, Björck L, Dudas K, Lappas G, Rosengren A. (2009) Symptoms of a first acute myocardial infarction in women and men, available from Mjbu, Vol 30, No. 1&2:doi: 10.1016/j.genm.2009.09.007

Braunwald, E. (2005). Heart diseases A Text book of cardiovascular medicine 7th ed. volume 11, Elsevier

Chong, S. A., Abdin, E., Vaingankar, J. A., Heng, D., Sherbourne, C., Yap,

M.,.Subramaniam, M. (2012). A population-based survey of mental disorders in Singapore. Annals of the Academy of Medicine-Singapore, 41, 49-66. [Internet]. Available .from:

Clark M J., (2008). Community Health Nursing Advocacy for population Health. 5th edition, Pearson prentice Hall: Upper Saddle River New Jersey: Ppt821

Darry P. Leong; Andrew Smyth; Koon K. Teo; Martin McKee; Sumathy Rangarajan, Prem Pais; Lisheng Li; Sonia S. Anand; Salim Yusuf (2014). Patterns of Alcohol Consumption and Myocardial Infarction Risk Observations From 52 Countries in the INTERHEART Case– Control Study ,available from.DOI: 10.1161/CIRCULATIONAHA.113.007627

David A.W (2005). Guidelines on cardiovascular risk assessment and management . The European Society of Cardiology 2005. [Internet]. Available .from: doi: 10.1177/0309364610397087.

Eva Brink,(2012).Considering Both Health-Promoting and Illness-Related Factors in Assessment of Health-Related Quality of Life After Myocardial Infarction . The Open Nursing Journal, 2012, 6, 90-94. [Internet]. Available .from:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3434460/

Garcia EL, Banegas JR, Perez-Regadera AG, et al. (2005) Social network and health- related quality of life in older adults: a populationbased study in Spain.

Qual Life Res 14:511– 520. [Internet]. Available .from: https://hqlo.biomedcentral.com/articles/10.1186/s12955-018-0845-7

Gaziano A.Thomas , Asaf Bitton, Shuchi An and, Gessel S. Abrahams, and Adrianna Murphy (2010).Growing Epidemic of Coronary Heart Disease in Low- and MiddleIncome Countries. 35(2): 72–115. doi:10.1016/j.cpcardiol. [Internet]. Available .from: https://pubmed.ncbi.nlm.nih.gov/20109979/

Graham I, Atar D, Borch-Johnsen K, Boysen G, Burell G, Cifkova R, Dallongeville J, De Backer G, Ebrahim S, Gjelsvik B, Herrmann-Linge C, Hoes A, Humphries (2007): European guidelines on cardiovascular disease prevention in clinical practice: executive summary: Fourth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice. [Internet]. Available .from: Eur [Internet]. Available .from http://www.ncbi.nlm.nih.gov/pubmed/26068959Heart J. 2007;28:2375–2414.

Hawkes, A. L., Patrao, T. A., Ware, R., Atherton, J. J., Taylor, C. B., & Oldenburg, B.

Hooper L, Martin N, Abdelhamid A, Davey Smith G,(2015). Reduction in saturated fat intake for cardiovascular disease. Medico-legal Update, Vol. 20, No. 4 [Internet]. Available .from: https://www.semanticscholar.org/paper/Reduction-in-saturated-fat-intake-for-

disease.-Hooper-Martin/ea18242908577bab9e9c83ad66ff3b06fb805313

https://www.ncbi.nlm.nih.gov/pubmed/18047180

Kiessling A., Henriksson P. 2007 Time trends of chest pain symptoms and health related quality of life in coronary artery disease. Health Quality life Outcomes. Chd Vol. 50, No. 4. [Internet]. Available .from:

https://hqlo.biomedcentral.com/articles/10.1186/1477-7525-5-13

K.Park (2015).preventive and social medicine . 23th edition, Bhanot : Ppt578

Lett H. S., Blumenthal J. A., Babyak M. A., Strauman T. J., Robins C., Sherwood A. (2005). Social support and coronary heart disease: epidemiologic evidence and implications for treatment. Psychosom. Med. 67, 869–878[Internet]. Available .from 10.1097/01.psy.0000188393.73571.

Mariee Grima, John B Dixon, 2013 Recommendations for management in general practice and beyond Volume 42, No.8, August 2013 Pages 532-541. [Internet]. Available .from.http://www.racgp.org.au/afp/2013/august/obesity/

Mattis Flyvholm Ranthe ,Jonathan Aavang Petersen,Henning Bundgaard,Jan Wohlfahrt, Mads Melbye, (2015) Family History of Myocardial Infarction and Risk of Myocardial Infarction – A Nationwide Cohort Study. Medico- 2020, Vol. 56, No. 4,available from : http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0125896A

Neyer,J.R, GreenlundKJ, Denny,C.H, KeenanN.L, LabartheD.R, Croft,J.B (2007). Prevalence of Heart Disease-United States 2005. Heart Disease and Stroke Prevention. National Center for Chronic Disease Prevention and Health Promotion. CDC. 56 (06);113-118[Internet]. Available .from: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5606a2.htm

Nies M and McEwen M,(2001).Community Health Nursing Promotion The Health of Population .W.B. SAUNDERS: Philadelphia.ppt215

Parashar S, Rumsfeld JS, Spertus JA, Reid KJ, Wenger NK, Krumholz HM, et al. Time course of depression and outcome of myocardial infarction. Arch Intern Med 2006; 166:2035–2043.

Rebecca Vigen, ; Colin I. O'Donnell, Anna E. Barón, 2013 Association of Testosterone Therapy With Mortality, Myocardial Infarction, and Stroke in Men With Low Testosterone Levels.eot. Vol. 35, No. 3. [Internet]. Available .from http://jamanetwork.com/journals/jama/fullarticle/1764051

Russell J. Everett, Mary N. Sheppard; David C. Lefroy,(2016) Chest Pain and Palpitations Circulation .dkh.Vol. 20, No. 4 .available at http://circ.ahajournals.org[Internet]. Available .from.DOI:

10.1161/CIRCULATIONAHA.112.001318.

Samartzis L, Dimopoulos S, Tziongourou M, Nanas S. 2013 .Effect of psychosocial interventions on quality of life in patients with chronic heart failure: a meta-analysis of randomized controlled trials. Dljl.Vol. 23, No. 2.[Internet]. Available .from https://www.ncbi.nlm.nih.gov/pubmed/23384638

Sattelmair J, Pertman J, Ding EL, Kohl HW 3rd, Haskell W, Lee IM 2011. Epub. Aug 1 Dose response between physical activity and risk of coronary heart disease: a meta-analysis.hgs. Vol. 35, No. 4

Seo DC ,2007 Torabi MRReduced admissions for acute myocardial infarction associated with a public smoking ban: matched controlled study.sdf. Vol. 23, No. 4. [Internet]. Available .from

Simpson, E & Pilote, L (2005). Quality of life after acute myocardial infarction: A comparison of diabetic versus non-diabetic acute myocardial infarction patients in Quebec acute care Hospitals Health and Quality of Life Outcomes.jcc. Vol. 23, No. 2 3-8. [Internet]. Available .from

https://pubmed.ncbi.nlm.nih.gov/16329755/

Sinha R., van den Heuvel W. J. A., Arokiasamy P. Factors affecting quality of life in lower limb amputees. Prosthetics and Orthotics International. Sggt. Vol. 14, No. 2. [Internet]. Available .from

Smltzer S.C, Bare B.G & Hinkle J.l (2008). Brunner & Sudarth's Text book of Medical Surgical Nursing, Eleven ed. Volume (1).Lippincott William. 874.

Stone, S. C., McGuire, S. L., Eigsti, D, G. (2008). Comprehensive Community Health Nursing Family aggressive and Community Practic.5 th edition, Mosby: USA: 335, 336

Thom T, Haase N, Rosamond W, et al, for the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics— 2006 update: a report from the AHA Statistics Committee and Stroke Statistics Subcommittee. Circulation. Gsd.Vol. 19, No. 4. [Internet]. Available .from:

https://pubmed.ncbi.nlm.nih.gov/16407573/

Veronique L. Roger , Alan S. , Donald M. Lloyd, Robert J. Adams, et al: Heart Disease and Stroke Statistics- 2011 update, A Report from the American Heart Association, Circulation, 2012; pp:125:188-197

Wachelder, E.M., Moulaert, V.R., van Heugten, C., Verbunt, J.A., Bekkers, S.C., Wade, D.T. Life after survival: long-term daily functioning and quality of life after an out-of-hospital cardiac arrest.Resuscitation. fgh.Vol. 19, No. 3.[Internet]. Available .from: https://www.sciencedirect.com/science/article/abs/pii/S0300957209000653