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AUDIOVISUAL CULTURE TO PREVENT CARDIOVASCULAR AND METABOLIC DISEASES IN HUMANS

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ABSTRACT

Audiovisual culture can be both an obstacle and an ally in the fight against cardiovascular and metabolic diseases, as we move towards an increasingly digitized future, it is crucial to harness the power of the media to foster a culture of prevention and self-care, empowering people to make informed and positive decisions about their health and well-being; Mexicans face a high risk of cardiovascular disease due to a high prevalence of risk factors such as obesity, due to their unhealthy lifestyles.

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1. Introduction

Audiovisual culture, in its essence, is a powerful and omnipresent medium that shapes our perceptions, values and behaviors, in the contemporary digital era, we are immersed in a tangle of moving images, sounds and messages that flood our senses through various platforms, from television and cinema to the Internet and social networks (López, 2022; Camacho, 2023), this saturation of audiovisual stimuli not only entertains, but also educates, informs and, at times, profoundly influences our physical and mental health (Burgos, 2021). In the context of cardiovascular and metabolic disease prevention, audiovisual culture can play a fundamental role as a tool for raising awareness and promoting healthy lifestyles, cardiovascular diseases, which include heart disease and stroke, represent one of the leading causes of death worldwide, while metabolic diseases, such as type 2 diabetes and obesity, are reaching epidemic proportions (Rossi, 2023).

The relationship between audiovisual culture and cardiovascular and metabolic health is complex and multifaceted, on the one hand, the media can perpetuate unrealistic stereotypes of beauty and health, promoting unrealistic body models and harmful behaviors, such as unhealthy diet, lack of exercise and excessive consumption of alcohol and tobacco (Rojas, 2023). These idealized representations can generate social and psychological pressures that contribute to the development of eating disorders, obesity and other health problems (Carrascal, 2022), on the other hand, audiovisual culture also has the potential to be a positive force for change, by educating and inspiring people to adopt healthier lifestyle habits, through films, television programs, documentaries and advertising campaigns (Jiménez & Fernández, 2024), it is possible to convey clear and motivating messages about the importance of a balanced diet, regular physical activity, stress management and prevention of the consumption of harmful substances (Navas & Pérez, 2023). In addition, digital platforms and mobile applications can provide interactive resources and tracking tools that help people monitor their health and stay committed to their wellness goals (Palacios, 2020).

In the July 6, 2017 issue of the New England Journal of Medicine, members of the Global Burden of Disease 2015 Obesity Collaborators presented data on the global prevalence of overweight and obesity in youth and adults and its impact on health outcomes, Using a body mass index (BMI) of 25-29 to reflect overweight status and ≥30 to reflect obese status, in 2015 there were 603.7 million adults and 107.7 children from 195 countries who were classified as obese. This translates to a global prevalence of 12.0% among adults and 5.0% among youth, with obesity globally estimated to have contributed to nearly 4.0 million deaths annually and nearly 5% of disability-adjusted life years from any cause; the majority of obesity-related deaths and disability-adjusted life years were due to cardiovascular disease (Montalvo and Alejo, 2020). In 2016, worldwide, more than 1.9 billion adults aged 18 years or older were overweight, of which more than 650 million were obese; in Mexico 75.2% of the population of adults aged 20 years or older has a weight above the recommended, distributed among women, 76.8% of which 36.6% are overweight and 40.2% are obese, while in men it is 73.0%. of which 42.5% are overweight and 30.5% are obese (Dupotey, 2021).

This situation is alarming when we know that the leading cause of death in Mexico is cardiovascular diseases (20.7%), which are preventable. Acute myocardial infarction (AMI), usually referred to in simple terms as a heart attack, is most often caused by a decrease or interruption of blood flow to a part of the heart, leading to necrosis of the heart muscle (Carrillo et al., 2022). The available oxygen supply cannot meet the oxygen demand, resulting in cardiac ischemia. The decrease in coronary blood flow is multifactorial. Atherosclerotic plaques classically rupture and lead to thrombosis, which contributes to an acute decrease in coronary artery blood flow (Fiol et al., 2001), (Montes de Oca, 2022).

In Mexico, the prevalence of overweight and obesity has increased alarmingly in the last two decades; in 2018 nationwide, the percentage of adults aged 20 years and older with overweight and obesity was 75.2 percent (39.1 percent overweight and 36.1 percent % obese), a percentage that in 2012 was 71.3 percent.6 It is well known that obesity is an independent risk factor for cardiovascular disease (CVD) and one of the main causes of increased risk of diseases such as dyslipidemia, insulin resistance, arterial hypertension (AHT) or HT and atherosclerosis in both adults. and children (Salinas, Schleef, Neira & Ortiz, 2022). According to INEGI in 2018, 88.4% of all deaths were due to diseases and health-related problems, highlighting cardiovascular diseases as the leading cause of death in Mexico and the rest of the world; being directly related to atherosclerosis and its different risk factors (Revueltas et al., 2021).

Of the total deaths caused by cardiovascular diseases in 2018, 79,997 were men and 69,357 women, having a total of 149,368 cases; Ischemic pathologies accounted for 72.7% of these with 108,616 cases. In Mexico, cardiovascular diseases also represent the leading cause of death. The National Institute of Statistics and Geography (INEGI) reported 116,002 deaths in 2015, 70% due to acute myocardial infarction. Since 2013, the Organization for Economic Cooperation and Development (OECD) ranked Mexico as the country with the highest 30-day mortality in people over 45 years of age due to acute myocardial infarction with 27.2%, up from 7.9%. A decrease in overall mortality has been observed; however, in 2015 a small increase of 58% was reported in our country (Izcovich et al., 2019).

It has been documented that up to 68% of young Mexican patients have more than three risk factors, and in the first real-life study in the IMSS on patients with acute coronary syndrome, up to 65% of patients were at high risk. By health problems, the three leading causes of death for both men and women are: heart disease (141,619, 20.1%), diabetes mellitus (106,525, 15.2%) and malignant tumors (84,142, 12.0%). Of the total number of deaths caused by heart disease, which amounted to 141,619 cases, ischemic heart disease accounted for 71.9% with 101,877 cases, followed by hypertensive heart disease with 16.4% (23,215 cases) and those related to pulmonary circulation and other heart disease with 11.1% (15,763 cases). Acute rheumatic fever and chronic rheumatic heart disease together accounted for 0.6% (764 cases). This research is important because acute myocardial infarction is a relevant problem due to its frequency, cost in human lives and expenses, as well as the problems involved in treatment for patients (Niño & Ballesteros, 2022).

2. Development

The WHO defines overweight and obesity as an abnormal or excessive accumulation of fat that can be detrimental to health. However, we cannot leave obesity only with an anatomical definition, since this disorder must also be defined as a systemic disease. Obesity is a chronic, multi-organ, metabolic and inflammatory disease, determined by the relationship between the genomic and the environmental, phenotypically expressed by excess body fat, leading to an increased risk of morbidity and mortality. Obesity is a chronic disease that is associated with a wide range of complications that affect very diverse aspects of physiology, increasing the risk of morbidity due to chronic disease, disability, depression, type 2 diabetes mellitus (T2DM), cardiovascular disease, certain types of cancer and finally, mortality (Quintero & Sanchez, 2022).

The most widely used measure of overweight and obesity is the body mass index (BMI), a simple index for classifying overweight and obesity in adults. It is defined as weight in kilograms divided by the square of height in meters (kg/m2). BMI provides the most useful population-based measure of overweight and obesity, as it is the same for both sexes and for all ages of adults. BMI has some limitations related to the assessment of fat mass, as well as to the diagnosis of alterations related to overweight and obesity. It was introduced into research and clinical practice on the basis of the association between BMI and mortality, with a "healthy" BMI range associated with the lowest level of mortality, which is in the range between 18.5 and 25 kg/m2. This range varies, for example, according to age, ethnicity and chronic disease. Thus, BMI values above 25 kg/m 2, i.e., between 25 and 29.9 kg/m 2 and above 30 kg/m 2, were defined as overweight and obese (Mokhlesi et dol., 2019).

Figure 1 shows the classification according to body mass index:

Figure 1. BMI Classification BMI Classification.

Clasificación	IMC (Kg/m²)	Riesgo
Normal	18.5 - 24.9	Promedio
Sobrepeso	25 - 29.9	Aumentado
Obesidad grado I	30 - 34.9	Moderado
Obesidad grado II	35 - 39.9	Severo
Obesidad grado III	Más de 40	Muy Severo

Source: World Health Organization

Detailed analyses revealed considerable interindividual variations in associations between BMI and subcutaneous adipose tissue (SAT) or visceral adipose tissue (VAT) or skeletal muscle mass or biomarkers of insulin resistance and inflammation or adipocyte secretory activity. . It is clear that BMI can define neither excessive fat accumulation nor related functional alterations. The most serious health consequences of obesity are hypertension, diabetes, myocardial infarction and serious cardiovascular accidents. In particular, diabetes, a consequence of excess calories, shows a direct association with other comorbidities, such as hypertension, which is positively correlated due to vascular damage. For this reason, the prevalence of cardiovascular complications has reached 64% in obese and diabetic older American patients alone, with an incidence of ischemic heart disease exceeding 30% of cases (Garcia et al., 2021).

The following table shows the different comorbidities with which obesity is related:

Table 1. Obesity-related comorbidities

Respiratory	Obstructive sleep apnea, increased predisposition to respiratory infections, increased incidence of bronchial asthma and Pickwickian syndrome.
Malignancy	Cancer of the endometrium, prostate, colon, rectum, breast, gallbladder, gastric cardia, biliary tract, pancreas, ovary, kidney and possibly lung cancer.
Cardiovascular	Ischemic heart disease, essential hypertension, left ventricular hypertrophy, cor pulmonale, obesity-associated cardiomyopathy, accelerated atherosclerosis.
Central Nervous System (CNS)	Stroke, idiopathic intracranial hypertension, and meralgia paresthetica.
Obstetrics and perinatal	Pregnancy-related hypertension, fetal macrosomia, and pelvic dystocia.
Surgical	Increased surgical risk and postoperative complications, such as wound infection, postoperative pneumonia, deep vein thrombosis and pulmonary embolism.
Gastrointestinal (GI)	Gallbladder disease (cholecystitis, cholelithiasis), non-alcoholic steatohepatitis (NASH), fatty liver infiltration and reflux esophagitis.
Orthopedics	Osteoarthritis, coxa vera, slipped femoral epiphysis, Blount disease and Legg-Calvé-Perthes disease and chronic low back pain.
Metabolic	DM2, prediabetes, metabolic syndrome, and dyslipidemia.
Reproductive (in women)	Anovulation, precocious puberty, infertility, hyperandrogenism and polycystic ovaries.
Reproductive (in men)	Hypogonadotropic hypogonadism
Cutaneous	Intertrigo (bacterial and/or fungal), acanthosis nigricans, hirsutism and increased risk of cellulitis and anthrax.
Extremity	Venous varicose veins, venous and/or lymphatic edema of the lower extremities.

Source: Own elaboration, 2023

In the obese, 30-day mortality after hospitalization for myocardial infarction reached 16% without diabetes and 19% in diabetics in the United States alone. In 2012, there were more than 110,000 deaths due to cardiovascular disease. Mortality due to comorbidities and weight gain itself is a prominent fact worldwide in different populations. This finding suggests that preobesity and obesity alone are associated with increased mortality (Salinas et al., 2022). There is the inability of BMI to differentiate visceral and subcutaneous fat mass and even lean body mass; BMI is a predictor of lean body mass rather

than adiposity in patients with heart failure, suggesting that some patients with normal BMI represent increased visceral adiposity with decreased lean body mass; It is conceivable that adiposity disproportionality rather than BMI is critically associated with the accumulation of cardiovascular risk factors such as insulin resistance, hypertension, and low-grade systemic inflammation (Ramos, 2022).

Mexico is the country with the second highest adult obesity in the world, after the United States according to the Organization for Economic Cooperation and Development (OECD); Obesity is the main public health problem in Mexico and has been increasing in the last 30 years. In the last national survey (2018), 36.1% of adults presented obesity (BMI ≥30 kg/m2), with a substantially higher prevalence in women than in men (40.2% vs 30.5%). The results also showed that only 23.5% of the adult population had a healthy weight (BMI ≤25 kg/m2), with even fewer adults in the 40-49 age group (15.4%). In addition, central obesity (≥94 cm in men or ≥80 cm in women) was present in 81.6% of all adults (>90% for adults aged 50-70 years) and morbid obesity increased by 96.5% from 2000 to 2018 (Ulloa, 2022).

Acute myocardial infarction (AMI), commonly known as myocardial infarction, is pathologically defined as irreversible myocardial cell death caused by ischemia. Clinically, myocardial infarction is a syndrome that can be recognized by a set of symptoms, with chest pain being the hallmark of these symptoms in most cases, supported by biochemical laboratory changes, electrocardiographic (ECG) changes, or findings on imaging modalities capable of detecting myocardial injury and necrosis. The Fourth Universal Definition of Myocardial Infarction proposes that the term acute myocardial infarction (AMI) be used only when there is acute myocardial damage with clinical evidence of acute myocardial ischemia.

The diagnosis of AMI requires an increase or decrease in troponin values and the presence of at least one of the following criteria: symptoms of acute myocardial ischemia; new ischemic electrocardiographic (ECG) findings; development of new abnormal Q waves; imaging evidence of loss of viable myocardium or abnormal motion of any of the walls due to an ischemic cause; or identification of a coronary thrombus on angiography. Otherwise, the proposal is to refer only to myocardial damage (Dupotey, 2021).

Acute myocardial infarction is one of the leading causes of death in the world, the prevalence of the disease is close to three million people worldwide. It can be divided into two categories, non-ST-segment elevation MI (NSTEMI) and ST-segment elevation MI (NSTEMI); both obesity and atherosclerosis are considered chronic inflammatory diseases. Lipids, oxidized LDL particles and free fatty acids activate the inflammatory process and trigger the disease. Inflammation is responsible for all steps toward atherosclerosis, from early endothelial dysfunction to atherosclerotic plaques that cause complications, and is related to obesity, insulin resistance, and type 2 diabetes. Adipose tissue releases adipocytokines, which induce insulin resistance, endothelial dysfunction, hypercoagulability, and systemic inflammation. In visceral obesity, inflammatory adipocytokines are elevated to higher levels. In addition, increased C-reactive protein level is associated with an increased risk of myocardial infarction (González, Vázquez and Gómez, 2021).

Hypercholesterolemia is considered one of the main triggers of atherosclerosis, causing changes in arterial endothelial permeability that allow the migration of lipids, especially LDL-C, to the arterial wall. Circulating monocytes adhere to endothelial cells expressing adhesion molecules and selectins, migrate by diapedesis into the subendothelial space, the monocytes acquire macrophage characteristics and become foamy macrophages. LDL particles are oxidized and become strong chemoattractants. Most coronary thrombi are caused by plaque rupture (55.65%), followed by erosions (30-35%) and, less frequently, calcified nodules (2-7%). Rupture-prone plaques usually contain a large, soft, lipid-rich necrotic core with a thin (≤65 μm), inflamed fibrous cap. Other common features include expansive remodeling, large plaque size (>30% of plaque area), plaque hemorrhage, neovascularization, inflammation of the adventitia, and "dotted" calcifications (Montalvo and Alejo, 2020).

The ESC/ACCF/AHA/WHF Joint Task Force further classified MI into 5 types based on the underlying cause (Table 2):

Table 2. Classification of MI

Type 1 (spontaneous MI)	Related to rupture, ulceration, fissure, erosion or dissection of atherosclerotic plaque with intraluminal thrombus in one or more of the coronary arteries, leading to decreased myocardial blood flow and resulting in myocyte necrosis.
Type 2 (secondary to ischemic imbalance)	Consequence of increased oxygen demand or decreased oxygen supply such as coronary endothelial dysfunction, spasm, embolism, tachyarrhythmias or bradyarrhythmias.
Type 3 (death biomarker values not available)	Sudden unexpected cardiac death before blood samples for biomarkers can be drawn or before they appear in the circulation
Type 4a (MI related to percutaneous coronary intervention [PCI])	Elevation of biomarker values to greater than 5 times the 99th percentile or increase to values greater than 20% if baseline values are elevated but stable.1 symptoms suggestive of myocardial ischemia; 2 new ischemic ECG changes; 3 angiographic loss of patency of a major coronary artery; or 4 demonstration of new loss of viable myocardium.
Type 4b (MI related to stent thrombosis)	MI associated with stent thrombosis detected by coronary angiography or autopsy in the context of myocardial ischemia in combination with an increase and/or fall of heart biomarkers with at least a value above 99 percentile URL
Type 5 (related to coronary artery bypass grafting)	Elevation of cardiac biomarker values more than 10 times the 99th percentile URL. In addition, 1 new pathologic Q waves, 2 new graft documented by angiography or coronary artery occlusion, or 3 evidence of new loss of viable myocardium or new regional wall motion abnormality on imaging

Source: Own elaboration, 2023.

Mexico has positioned itself as the country with the highest mortality attributed to myocardial infarction among the members of the Organization for Economic Cooperation and Development (OECD), with a rate of 27.2% compared to the average of 7.9%. At just over 33%, Mexico's adult obesity rate is the second highest in the OECD, and is a known risk factor for many chronic diseases. High obesity rates, together with other factors such as lack of progress in reducing mortality from circulatory diseases, high mortality rates from traffic accidents and homicides, as well as persistent barriers to access to quality health care, explain why advances in life expectancy in Mexico have been slower in recent years (Quintero & Sanchez, 2022).

Acute occlusion of one or more large epicardial coronary arteries for more than 20 to 40 minutes can cause acute myocardial infarction, is usually thrombotic and is due to rupture of a plaque formed in the coronary arteries; the occlusion causes a lack of oxygen to the myocardium, leading to sarcolemmal rupture and relaxation of the myofibrils. Prolonged ischemia causes myocardial necrosis, which spreads from the subendocardium to the subepicardium. The infarcted area heals and the heart remodels, characterized by dilatation, segmental hypertrophy and cardiac dysfunction. Areas of myocardial infarction may be subepicardial if there is occlusion of smaller vessels by thromboembolism originating from coronary thrombi. Occlusion of the left main coronary artery usually causes a large anterolateral infarct, whereas occlusion of the left anterior descending coronary artery causes necrosis limited to the anterior wall.

Biomarkers, such as cardiac troponin and natriuretic peptides (NP), associated with acute coronary syndromes and heart failure, respectively, play an important role. Cardiac troponin (cTn), expressed in three similar isoforms (I, C and T), is the biomarker of choice for diagnosis because it is the most sensitive and specific biochemical marker of myocardial ischemia/necrosis. Among the isoforms, the most specific markers of acute coronary syndromes are cardiac troponin I (cTnI) and cardiac troponin T (cTnT), whose elevations have become a predominant indicator of acute myocardial infarction (AMI) and are considered the "gold standard" in the diagnosis of AMI. Natriuretic peptides (NPs), composed of three structurally similar peptides, atrial natriuretic peptide (ANP), B-type (or brain) natriuretic peptide (BNP) and C-type natriuretic peptide (CNP), play an important role and are largely elevated in response to increased wall stretch due to volume or load stress in the IC. Men tend to suffer infarctions earlier than women. The rate of myocardial infarction in women increases after menopause, but is not the same as in men. Even so, heart disease is the leading cause of death in both men and women.

2.1 Audiovisual culture in the prevention of acute myocardial infarction and obesity

Audiovisual culture from the study by Gallardo-Camacho et al (2019) is understood as the production, consumption and critical analysis of visual and auditory content, can play a significant role in the prevention of acute myocardial infarction and obesity by promoting a healthy lifestyle and raising awareness of the risks associated with these health problems (Amador, 2021). First, the dissemination of educational messages through audiovisual media can be an effective tool to inform the public about the risk factors related to acute myocardial infarction and obesity; documentaries, television programs, online videos, and advertising campaigns can present information about the importance of a balanced diet, regular physical activity, stress management, and other healthy habits; these visual and auditory messages can reach a wide audience and convey information in a clear and accessible way, helping to raise awareness about the prevention of these diseases (Ríos, 2022).

In addition, audiovisual culture can inspire and motivate people to adopt a healthy lifestyle by showing positive examples of healthy behaviors on screen; movies, television shows, and online videos that feature characters who follow a balanced diet, participate in physical activities, and manage stress effectively can serve as role models for the audience, these representations can influence people's attitudes and behaviors, encouraging them to make positive changes in their own lives (Tinajero, 2019). On the other hand, audiovisual culture can also challenge stereotypes and social norms related to food and body image, the representation of a variety of bodies and lifestyles in the media can help counteract social pressure to achieve certain standards of beauty and weight, which can contribute to the prevention of obesity and eating disorders. In addition, audiovisual culture can foster acceptance and inclusion by representing body diversity and promoting a positive attitude toward health and wellness rather than simply focusing on physical appearance (Candiota, Feijó & González, 2023).

Audiovisual culture can be a powerful tool to prevent acute myocardial infarction and obesity by educating, motivating and challenging perceptions and behaviors related to health and wellness. By harnessing the power of visual and auditory media, we can work toward promoting healthy lifestyles and reducing the incidence of these chronic diseases in society (Vivar, 2022).

3. Materials and methods

In this research, the method used focused on documentary analysis (Arias, 2012). This author comments that this process is based on the search, compilation, analysis, critique and interpretation of secondary information obtained and compiled by other researchers in different documentary sources. The most important thing about this study is to relate the data that exist for a given construct, generating a panoramic view that allows adequate solutions to the problem posed (Rivera, Carrillo, Forgiony, Nuván & Rozo, 2018).

Accordingly, the article addresses concepts related to obesity and acute myocardial infarction that occur in the adult population in Mexico. In this review article, it can be highlighted that a rigorous selection was made of papers available in the databases Google Scholar, Redalyc, Dialnet, Web of Science and Scopus, published during the periods 2019-2023. As a starting point and following the logical order of the search, the terms "obesity" and "mild myocardial infarction" were used, filtering them with commas and asterisks, obtaining in Google Scholar 23970 search results, in Redalyc 22219, Dialnet 14 780, Web of Science 2795 and Scopus 11490.

4. Results and discussion

According to all the studies and the information gathered, it was shown that there is a relationship between acute myocardial infarction and obesity in adult patients in Mexico, with hypercholesterolemia and dyslipidemia being the cause of the formation of atherosclerotic plaques that rupture and occlude an artery, as well as the criteria that acute myocardial infarction must have according to the fourth definition to be considered as such (Shamah et al., 2020). Although BMI is the most widely used method to measure obesity, it is not the most accurate and has errors due to the extent of fat since it does not discriminate whether it is peripheral or visceral. Based on the information analyzed, it can be considered that obesity is a pandemic, due to the figures mentioned by the WHO since 2016 where the annual increase is 13% worldwide, which leads to high economic expenses in each country. taking as an

example the countries of the European Union where they spend approximately 7% of their health budgets on obesity-related diseases (Jankowski, 2021).

Acute myocardial infarction is a major problem worldwide, present in all countries, including those of the first world, especially Germany, England, France, as well as Switzerland. Not only is it a pathology that claims the lives of many patients, but it is also a great expense for the government where, just to cite England, the expenses generated are around 6.8 billion pounds (Ulloa et al., 2022). Although in most European countries research and efforts are being made to solve this problem, however, in countries such as Russia where there is a high mortality rate related to acute myocardial infarction, due to risk factors present in the population such as alcoholism, obesity and smoking, there are no studies or research in this regard, unlike England and Germany where they have given great importance to both the problem of obesity and acute myocardial infarction where both risk factors are related (Aldeán, 2021).

In the case of the United States, the main focus is on the relationship between the prevalence of acute myocardial infarction and government spending on public health; Canada also presents research focused on prevalence and social spending. In addition, they also differentiate which gender is most affected, with women having some protection at the beginning due to hormonal factors, and then losing it at the onset of menopause; however, the most affected gender continues to be male (Sánchez, Ripalda & Bastidad, 2022). In Mexico, the prevalence of obesity is increasing alarmingly, which despite government efforts to address this problem has not been able to decrease, resulting in the emergence of diseases such as hypertension, diabetes, dyslipidemia and hypercholesterolemia that eventually leads to acute myocardial infarction, and cardiovascular diseases are also the leading causes of death in our country (González, Vázquez & Gómez, 2021).

5. Conclusions

It was concluded that there is a relationship between acute myocardial infarction and obesity, and that older adults with obesity are also at high risk of suffering from this condition in Mexico, especially the male sex, which has the highest prevalence worldwide. The literature review showed that age plays an important role in acute myocardial infarction, with those over 60 years of age having the highest prevalence rate, and the male sex being the most affected with a higher prevalence of this factor both in hospital admissions and deaths. However, more research is needed in the country in this regard, since the recent SARS-COV-2 pandemic caused a deterioration in the health of people with chronic degenerative diseases.

References

Aldeán, J. Á., Cenoz, M. G., Sanz, I. J., Margüello, E. R., Astiz, M. T. V., & Rojas, A. G. (2021). Influenza and cardiorespiratory events: a multidisciplinary clinical-epidemiological review. Rev Esp Quimioter, 34(6), 556-568.

Amador-Baquiro, J. C. (2021). Digital content for early childhood children: the case of the Maguaré portal. Revista Virtual Universidad Católica del Norte, (64), 119-150.

Burgos de Frutos, P. (2021). Audiovisual literacy through children's cinema: a proposal for didactic intervention in Early Childhood Education.

Camacho Fernández, P. (2023). Effects of information overload on news consumer behavior: doomscrolling. VISUAL REVIEW. International Journal of Visual Culture International Journal Of Visual Culture , 14 (1), 1-11. https://doi.org/10.37467/revvisual.v10.4592

Candiota, M., Feijó, M. J., & González, S. (2023). Analysis of Inmujeres' Jugá en equipo advertising campaign: a look at the co-responsibility of domestic and care tasks in Uruguay.

Carrascal-Fuentes, JA (2022). Interculturality in Health: Resignifying horizons in Medical Education. VISUAL REVIEW. International Journal of Visual Culture International Journal Of Visual Culture , 11 (1), 1-8. https://doi.org/10.37467/revvisual.v9.3630

Carrillo-Alemán, L., López-Martínez, A., Carrillo-Alcaraz, A., Guia, M., Renedo-Villarroya, A., Alonso-Fernández, N., & Pascual-Figal, D. (2022). Evolution of patients with acute heart failure secondary to acute myocardial infarction treated with noninvasive mechanical ventilation. Revista Española de Cardiología, 75(1), 50-59.

Dupotey, H. D. R. (2021). Educational intervention in cardiovascular disease prevention in urban communities. Conrado, 17(81), 363-373.

Gallardo-Camacho, J, Sierra Sánchez, J. & Lavín, E. (2019). The deferred consumption cycle of television programs after linear broadcasting in Spain. Communication & Society, 32(2), 29-43.

García-Castillo, F. I., López-Carrillo, M. Y., Mendiola-Pastrana, I. R., López-Ortiz, E., Guízar-Sánchez, D. P., & López-Ortiz, G. (2021). Estimation of atherosclerotic cardiovascular risk in adult patients without suspected hypertension. University Nursing, 18(2), 48-62.

González, E. L., Vázquez, L. W., & Gómez, N. C. V. (2021). Incidence of acute myocardial infarction with left bundle branch block, in the cardiac intensive care unit, Ernesto Guevara Hospital, Cuba 2017-2018. Universidad y Sociedad, 13(S1), 68-74.

Fiol, M., Cabadés, A., Sala, J., Marrugat, J., Elosua, R., Vega, G., ... & García, J. (2001). Variability in hospital management of acute myocardial infarction in Spain. IBERICA study (Investigation, Specific Search and Registry of Acute Coronary Ischemia). Revista Española de Cardiología, 54(4), 443-452.

Jankowski, J., Floege, J., Fliser, D., Böhm, M., & Marx, N. (2021). Cardiovascular disease in chronic kidney disease: pathophysiological insights and therapeutic options. Circulation, 143(11), 1157-1172.

Jiménez Marín, G., & Fernández-Osso Fuentes, M. (2024). Communication, Digital Marketing and Health: The image of the influencer with a social welfare purpose. VISUAL REVIEW. International Journal of Visual Culture International Journal Of Visual Culture , 16 (2), 217-227. https://doi.org/10.62161/revvisual.v16.5229

Izcovich, A., Caruso, D., Bottaro, F., Pollán, J., Saavedra, E., & Catalano, H. N. (2019). Dual antiplatelet therapy for secondary stroke prevention in patients with acute ischemic stroke. Recommendation of the TRUE group. Medicine, 79(4), 315-321.

López Ruiz, MJ (2022). Health care in schoolchildren as disease prevention: Childhood health in the COVID-19 era. VISUAL REVIEW. International Journal of Visual Culture International Journal Of Visual Culture , 11 (1), 1-11. https://doi.org/10.37467/revvisual.v9.3637

Martínez Martínez, R., Castañeda Guillot, C. D., & Pimienta Concepción, I. (2022). Gut microbiota and diabetes. Universidad y Sociedad, 14(2), 158-163. Retrieved from https://rus.ucf.edu.cu/index.php/rus/article/view/2688

Mokhlesi, B., Masa, J. F., Brozek, J. L., Gurubhagavatula, I., Murphy, P. B., Piper, A. J., ... & Teodorescu, M. (2019). Evaluation and management of obesity hypoventilation syndrome. An official clinical practice guideline of the American Thoracic Society. American journal of respiratory and critical care medicine, 200(3), e6-e24.

Montalvo, V. H. O., & Alejo, J. C. P. (2020). The vulnerability of Mexicans to the COVID-19 pandemic. Milenio, Ciencia y arte, (16), 8-10.

Montes de Oca Rojas, Y., Barros Bastidas, C. I., & Castillo Cabeza, S. N. (2022). Research methodology in entrepreneurship: A strategy for the scientific production of university teachers. Revista de Ciencias Sociales, 28(2), 381-391. https://doi.org/10.31876/rcs.v28i2.37945

Navas, M. D. C. O., & Pérez, M. G. (Eds.) (2023). Multidisciplinary education in eating disorders: driving change. Ediciones Octaedro.

Niño Peñaranda, C. J., & Ballesteros Pinzón, G. A. (2022). Relationship between sexuality and acute myocardial infarction from a phenomenological perspective. Enfermería Global, 21(66), 109-138.

Palacios, C. (2020, December). Use of mobile applications for nutritional interventions. In Anales Venezolanos de Nutrición (Vol. 33, No. 2, pp. 177-182). Bengoa Foundation.

Quintero, M. A., & Sánchez, D. C. (2022). Arterial hypertension: risk factors and biopsychosocial intervention3. Health psychology: comprehensive approach to chronic diseases, 105.

Ramos, M. C. F. (2022). Metabolic syndrome: review of the literature. Medicine and Laboratory, 26(1), 47-62.

Revueltas-Agüero, M., Benítez-Martínez, M., Hinojosa-Álvarez, M. D. C., Venero-Fernández, S., Molina-Esquivel, E., & Betancourt-Bethencourt, J. A. (2021). Characterization of cardiovascular disease mortality: Cuba, 2009-2018. Revista Archivo Médico de Camagüey, 25(1).

Ríos Ponce, M. A. (2022). Social marketing for the prevention of childhood obesity in the city of Cuenca-Ecuador.

Rojas, A. L. (2023). Building Healthy Schools: Promoting Wellness and Health in the Environment. Psychiatry, 46(3), 187-195.

Rossi Pérez, A. B. (2023). Analysis of pedagogical strategies used by expert endocrinologists in diabetes education for health promotion and prevention of diabetes complications.

Salinas-Aguirre, J. E., Sánchez-García, C., Rodríguez-Sánchez, R., Rodríguez-Muñoz, L., Díaz-Castaño, A., & Bernal-Gómez, R. (2022). Clinical characteristics and comorbidities associated with mortality in patients with COVID-19 in Coahuila (Mexico). Revista Clínica Española, 222(5), 288-292.

Salinas-Rehbein, B., Schleef, J., Neira-Vallejos, S., & Ortiz, M. S. (2022). Social support and obesity: The role of depressive symptoms and emotional eating in a sex-stratified model. Global Health Promotion, 29(4), 171-179.

Salvador Arroba, J. A., & Loyola Carrasco, D. J. (2022). Update on periodontal disease and relationship with diabetes mellitus. Universidad y Sociedad, 13(S1), 75-81. Retrieved from https://rus.ucf.edu.cu/index.php/rus/article/view/2007

Sánchez Mata, M. E., Ripalda Asencio, V. J., & Bastidas Sánchez, C. J. (2022). Relationship between ultraprocessed foods and beverages and overweight in schoolchildren aged 8 to 11 years from urban and rural public schools in Milagro, Ecuador. Revista Universidad y Sociedad, 14(1), 416-425.

Shamah-Levy, T., Campos-Nonato, I., Cuevas-Nasu, L., Hernández-Barrera, L., del Carmen Morales-Rúan, M., Rivera-Dommarco, J., & Barquera, S (2020). Overweight and obesity in a vulnerable Mexican population. Results from the Ensanut 100k. Salud Pública de México, 61(6), 852-865.

Tinajero Arias, C. (2019). A look at fitness influencers on Instagram from the user's perspective.

Ulloa, J. H., Moreno, O. Y., Solano, A., & Ramírez, J. (2022). Eponyms: lives beyond surgery. Medicine, 44(2), 237-261.

Vivar Estay, V. (2022). Design of a management control system for Instituto de Diagnóstico SA.