

The Relationship Of Covid-19 And Chronic Disorders In Maxico.

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ABSTRACT

Background:The COVID-19 pandemic has disproportionately affected individuals with chronic degenerative diseases, contributing to increased morbidity and mortality worldwide. In Mexico, where such conditions are prevalent, understanding their association with COVID-19 outcomes is crucial.

Objective:To identify the risk factors associated with morbidity and mortality due to COVID-19 among individuals of different age groups suffering from chronic degenerative diseases in Mexico during 2020.

Methods:A systematic literature review was conducted to address the research question. Specific descriptors were used to search the DeCS and MeSH platforms, and strategies were developed to retrieve relevant studies from major health science databases, including Google Scholar, PubMed, and SciELO. The search spanned three months.

Results:Eleven relevant publications were identified. The findings revealed that obesity was the most significant predictor of COVID-19 morbidity and mortality, followed by diabetes, hypertension, and chronic kidney failure. The population most affected included men over sixty years old, particularly from the states of Mexico, Veracruz, Oaxaca, and Guanajuato. Approximately 73% of patients exhibited mild outpatient symptoms. However, individuals with cerebrovascular disease, chronic kidney disease, bronchial asthma, and elevated triglyceride or cholesterol levels were at higher risk of death.

Conclusion:Hypertension, diabetes, obesity, and cardiovascular diseases are the most prevalent chronic degenerative conditions associated with adverse COVID-19 outcomes. The presence of these comorbidities significantly increases the risk of morbidity and mortality in the Mexican population..

Keywords: *A risk factor for chronic degenerative disease is the Covid-19 virus.*

INTRODUCTION

Coronavirus illness, often known as COVID-19, is a A little more than three months after it was first detected in China in December 2019, it has since spread to more than one hundred nations worldwide (Martos-Benitez et al., 2021). A specific pharmacological treatment is not available for this condition, and the processes of transmission and mortality are not well understood (Acevedo-Sánchez et al., 2023). Applied research results have demonstrated that these viruses are single-stranded RNA viruses particularly susceptible to mutation (Angulo-Zamudio et al., 2021). These organisms can infect humans, but their natural hosts are a wide variety of animal species (mammals, birds), and their human infection needs to be regarded as a zoonosis. This would increase the number of species worldwide (Hernández-Vásquez et al., 2020). It enables rapid adaptation to new hosts and provides benefits². The problem was referred to as "Coronavirus Disease 2019" (COVID-19) by the World Health Organization, which also proclaimed it a health emergency of concern to the international community (Escobedo-de la Peña et al., 2021). Following that, the Study Group of Coronavirus decided to name the virus SARS-CoV2 as its official designation. The symptoms of COVID-19 that are most frequently experienced are fever, dry cough, and exhaustion. Other less common symptoms that patients experience include general discomfort, nasal congestion, headache,

conjunctivitis, pharyngitis, diarrhoea, loss of taste or smell, and other symptoms such as skin rashes or colouring of the fingers or toes as a result of a lack of oxygenation (Parra-Bracamonte et al., 2020). Depending on the state of the body or whether you are afflicted with a chronic degenerative disease, these substances affect the body. The most common way COVID-19 is transmitted is through droplets ejected from the respiratory tract by a person coughing or experiencing other symptoms such as fever or fatigue (Berumen et al., 2020). There are many people who have COVID-19 who only have modest symptoms. This is especially an important consideration in the early stages of the disease (Pizuorno & Fierro, 2021). There is a possibility of contracting the disease from someone who is simply experiencing a moderate cough and does not appear sick. Until the 13th of July in the year 2020, there had been 12,983,846 confirmed cases and 571,691 deaths reported around the world (Martínez-Martínez et al., 2022). In this view, various official and unofficial media outlets around the world are in agreement that aged people, people with immunological status or immunosuppression, and people who suffer from chronic diseases are the individuals who have the highest proportion of vulnerability to the transmission of COVID-19 (Ñamendys-Silva et al., 2021). There were 37,046 new cases and 2,207 deaths recorded in the last twenty-four hours in the Americas Region in April. This percentage reflects a relative rise of 9% (cases) and 17% (deaths) compared to the previous day (Giannouchos et al., 2020). According to information obtained from the Government portal⁵, there are 304,435 verified cases in Mexico (Solís & Carreño, 2020). Of these cases, 46,012% are female and 53.98% are male. Additionally, 19.97% of confirmed cases report suffering from hypertension, 19.27% report being obese, 16.25% report having diabetes, and 7.47% report smoking. There are a total of 35,491 fatalities that are presented as COVID. There have been a total of 7,632 verified cases in Guerrero, with 43.80% of them being female and 56.20% being male (Denova-Gutiérrez et al., 2020). Notably, 21.61 per cent of confirmed cases have reported suffering from hypertension, 17.81 per cent from obesity, 18.95 per cent from diabetes, and 4.72 per cent from smoking. COVID-19 was responsible for a total of 1,108 deaths. Regarding the situation in Mexico, José Luis Alomía

Zegarra⁷, who is the General Director of Epidemiology, made a statement stating, "comorbidities or risk factors risk that these individuals have had: high blood pressures, diabetes, and obesity, those that have been most prevalent stand out in terms of comorbidity, and it is important to keep in mind that over 80 per cent of deaths have even had two linked comorbidities (Bello-Chavolla et al., 2020). The Secretary of Health has highlighted in the daily briefings that she has made that the five Comorbidities, such as high blood pressure, diabetes mellitus, obesity, chronic obstructive pulmonary disease (COPD), and kidney failure, are the primary causes of comorbidity. As of April 5⁷, 42.55 per cent, 38.30 per cent, 35.11 per cent, 10.54 per cent, and 9.57 per cent of those who passed away had comorbidities. Therefore, identifying comorbidities associated with severe clinical presentation of COVID-19 is essential for developing health strategies oriented towards preventing and treating medical complications in the context of this disease (Calixto-Calderón et al., 2021). This is because identifying these comorbidities is necessary for the appropriate therapeutic approach to be taken with patients affected by the disease (Najera & Ortega-Avila, 2021).

METHOD: The descriptors were searched in the title, the abstract, and the key phrases, and the following was mentioned: "Covid-19" is a viral disease produced by the coronavirus genus. Transmissible turkey enteritis, feline infectious peritonitis, and transmissible swine gastroenteritis are a few examples of the specific types of diseases that can be transmitted (Salinas-Aguirre et al., 2022). There have been nine "coronavirus infections," diseases caused by viruses from the coronavirus genus. Comorbidities are defined as coexisting or additional disorders concerning an initial diagnosis or the index condition that is the subject of the study. Comorbidities will be discussed further in the following paragraphs (Villalpando et al., 2022). The ability of affected individuals to function and their ability to survive can be impacted by comorbidity, which can also serve as a prognostic predictor of the length of hospital stay, risk factors, cost, and survival outcome (Ashktorab et al., 2021). In the same vein, a "chronic disease" is defined as a disorder that possesses one or more characteristics, such as being permanent, leaving a residual disability, being caused by an irreversible pathological alteration, necessitating special training for the patient to undergo rehabilitation, or having the potential to require a significant amount of time. Length of time spent under supervision, observation, or care; in such a way, chronic degenerative diseases are diseases that endure for a long time and generally progress slowly (Martínez-Murillo et al., 2021). The leading causes of death around the world include cardiovascular disease, stroke, cancer, respiratory illnesses, and diabetes. These diseases are responsible for 63 per cent of all fatalities that occur worldwide (Chiquete et al., 2022).

Table 1: Qualifications for document selection

The inclusion requirements	Criteria for exclusion	Criteria for elimination
Every piece of writing was released in Mexico in 2020. articles written in Portuguese, Spanish, and English Covid-19 and chronic degenerative disease articles	Things that are not retrievable in full text articles with a cost of acquisition for text duplicate articles	Products that do not combine COVID-19 and "disease" factors

Process for searching documents



RESULT: According to the references on the various platforms already indicated, 11 papers were found when looking for studies based on the study question. These studies meet the inclusion requirements and provide evidence supporting the set goals. A thorough review was later conducted, with the following findings noted.

NO.	Those who write	Method	Primary findings
1	A towering figure, April Violeta Muñoz, towers over Enrique Bravo García. His name is Carlos Magis Rodríguez.	Analyse the article	It was found that the mortality rate among males in Tijuana was higher than 33.2%. Compared to the 25% of cases that were reported in females, which indicates a The difference in the likelihood of passing away is of exceptional significance. The group of people aged 20 to 29 had the lowest number of fatalities observed. In terms of years of age and from that particular group, there was an increase. Throughout the entire population until it reaches 65.8% For those aged 80 and up. About the lethality of COVID-19 in Those individuals who were suffering from various persistent ailments Not contagious, with a lethality that was about three times higher than the average a greater percentage of fatalities than the norm for the country (11.9%), with Except for asthma, of course.
2	This is Kevin Arnoldo Villagran Olivas. Luis Alejandro Torrontegui Zazueta Adolfo Entzana Galindo Are the Following:	due to observation, review of the past, both descriptive and transversal	Of the 192 patients confirmed to be in the Sinaloa hospital, 78 (40.62%) were female, and 114 (59.38%) were male. More than fifty per cent of the patients were between forty and sixty-five. In 33.3% of cases, the individual is

			<p>obese, 31.7% have high blood pressure, and 21.9% have diabetes mellitus. A general fatality rate of 31.25%, and the intubation rate is 75%.</p> <p>Patients older than sixty years old accounted for 56.6% of people who passed away.</p>
3	<p>Presented by Iliana Villerías Alarcón An individual named Maria del Carmen Juarez Gutierrez</p>	<p>cross-sectional observational and analytical observation</p>	<p>In the presence of diabetes mellitus and arterial hypertension, as well as the degree of correlation with COVID-19 and the likelihood of an increase in positive cases in populations, there is a greater likelihood of greater vulnerability.</p>
4	<p>a woman named Giovanna Santana Castaneta</p>	<p>Observational and Analytical Methods</p>	<p>Oaxaca, Veracruz, San Luis Potosí, Puebla, Guerrero, and Tabasco are the Mexican states that are in the greatest danger of experiencing a pandemic as a result of the newly evolved coronavirus SARS-CoV-2, which is responsible for the COVID-19 sickness.</p>
5	<p>This is Eduardo Hernandez. The name Garduño;</p>	<p>Various examples and controls</p>	<p>When it comes to both diabetes and hypertension, obesity is the most reliable predictor of Covid-19, followed by obesity. Chronic renal failure is only seen in females, regardless of gender. According to these data, these comorbidities are not present in the disease. The severity of the sickness is not the only thing related to them; it also makes people more likely to get COVID-19.</p>
6	<p>This is Elsa Berenice Gaona. The name Veronica Pineda Mundo Rosas, Ignacio Méndez Gomez, and Mundo Rosas Theresa Maria Luz Gomez The name Marco Avila Acosta Specifically, Teresa Ramos, Lucia Cuevas Nasu, and You, Shamah Levy</p>	<p>An examination of the case and control</p>	<p>The prevalence of chronic diseases, including hypertension, diabetes, excessive triglycerides, and cholesterol, among people who are above the age of 60 is about</p> <p>A risk factor for complications or mortality from the condition has been identified as being present in fifty per cent of Mexican people. Adults for whom Compared to the group characterised by not having any risk characteristics, those with chronic conditions exhibit a smaller proportion of the symptoms of the disease. In the case of COVID-19, those individuals are the least susceptible to the virus.</p>

			<p>Each of the four categories that comprised the population were identified. Men spent more time outside than women did, which was found to be a strong relationship between vulnerability and sex.</p> <p>Individuals who are sixty years of age or older who have diabetes or hypertension tend to spend less time with guests or friends when they are at home.</p> <p>Determine a smaller number of symptoms and measurements of Mitigation of the COVID-19 attack.</p>
7	Francisco Angel Serra Valdes.	Analytical observation	<p>Patients over the age of sixty, as well as those carrying NCCD, have the highest mortality rates. These conditions include high blood pressure (HTN), cardiovascular disease (CVD), obesity, diabetes mellitus (DM), chronic kidney disease (CKD), neoplasms (N), patients with long-standing bronchial asthma (BA), patients with chronic liver diseases (EHC), and other chronic diseases brought on by immune system disorders, some of which are rheumatic and neurological. There is a risk of infection-related death from HTN and CVD, which increases if the patient has diabetes mellitus and is older than 65. A severe coronavirus sickness is linked to diabetes mellitus (DM), a chronic illness with multisystem consequences.</p>
8	Jesus A. Trevino	Cases and regulations	<p>The findings verify that males die at a higher rate than women do and that diabetes, obesity, and hypertension are the population's three leading comorbidities. Statistics confirm that although smoking is linked to the death of people who are sick, it is not a factor in admission to the intensive care unit (ICU). It can be inferred from statistical research that there is no correlation between the use of indigenous languages and ICU admission.</p> <p>Native Americans who are infected with the virus do not have a more severe infection.</p>

9	Escudero Xavier Guamer Jeannette Raga Arturo Galindo Salamanca, Mara EscuderoMarco AlcocerGama Carlos del Río21	review paper	As people age, hospitalisation and mortality rates tend to rise. How deadly confirmed instances are In May 2020, the percentage was 6.6% for under-60-year-olds and up to 24% for those over 60. An average of 58 years old, 68.2% male, 42.5% with arterial hypertension, 39% with diabetic mellitus, 28.6% with obesity, 9.6% with smoking, 10.5 with chronic obstructive lung disease, 7.2% with chronic renal failure, and 6.3% with a history of cardiovascular disease were among the patients who passed away.
10	Juan Pablo Garcia M. Stefano Bertozzi	Analytical crossover	It was shown that there is a synergistic positive correlation between obesity, diabetes, and hypertension and all three outcomes. Among the analysed population, males (54.51% vs. 46.98%, $p < 0.001$) and older adults (46.66 years vs. 42.38 years, $p < 0.001$) had higher odds of testing positive for SARS-CoV-2.
11	V. Suarez (V) Regards, M. Suarez Quezada Specifically, S. Oros Ruiz and E. Ronquillo De Jesús	Various examples and controls	The city of Mexico City was the location of most COVID-19 instances worldwide. Forty-six years was the average age of the patients who were being treated. Men had a greater incidence of the disease (58.18%) than women (41.82%), and the age range between 30 and 59 years old had the highest number of infected individuals (65.85%) out of the total 12,656 confirmed cases. One or more comorbidities were present in the patients who passed away, the most common of which were hypertension (45.53 per cent), diabetes (39.39 per cent), and obesity (30.4%).

DISCUSSION:

This study's primary objective was to ascertain the morbidity and mortality rates of patients in Mexico suffering from chronic diseases and COVID-19 within the year 2020. According to this interpretation, the evaluated information describes a prevalence of COVID-19 at 4.8 at the national level. Obesity is the most significant predictor of COVID-19, accounting for 18.7% of cases, followed by diabetes and hypertension, chronic renal failure, and smoking 14, 15,17. According to these studies, these comorbidities make it more likely that a person may get Covid-19. Other conditions that have been discovered to compound it, in addition to having symptoms and a risk of dying, include cardiovascular disease (CVD) and chronic kidney disease (CKD). Even high levels of triglycerides and cholesterol, chronic renal disease, bronchial asthma, and bronchial asthma. Considering the age range, the average number of infected individuals is between 45 and 66 years old,

with a low mortality rate among patients aged 20 to 29 years old. 13,14 rising to 65.8% in those aged 60 and older who have one or more comorbidities, the most common of which is hypertension, followed by diabetes, and it is worth noting that the male population is the most afflicted, accounting for 52.9% of all cases 18, 21,23. About the presence of chronic diseases as a risk factor for COVID-19, it was discovered that the state of Mexico had the highest prevalence, accounting for 57% of all instances. The states of Guanajuato, Veracruz, Oaxaca, and Guanajuato followed this. With a respective value of 0.18 and 0.12, the states of Tamaulipas and Guerrero demonstrate a level of performance lower than the national average. The fact that people with chronic diseases identify a lower proportion of the disease symptoms and a lower vulnerability to COVID-19 is an important finding discovered in the current review.

CONCLUSION:

The presence of hypertension, diabetes, obesity, and cardiovascular disorders are the risk factors that are present in people who acquire COVID-19-related chronic diseases. Individuals must be male, over 45, and hail from Mexico, Veracruz, and Guanajuato. In the Mexican population, what factors contribute to improved control of chronic diseases through health self-care measures, and how may these tactics ensure that complications and their derivatives are avoided?.

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