

UNDERSTANDING THE COVID-19 PANDEMIC FROM PUBLIC HEALTH AND BIBLICAL PERSPECTIVES

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Abstract

The COVID-19 pandemic has left an indelible mark on the physical, social, economic, political, and spiritual life and well-being of individuals, communities, institutions, and systems. The disruptive effects of this global crisis call for a deeper reflection and understanding of both the public health and biblical perspectives on pandemics to guide future physical, social, economic, political, and mental responses to future pandemics. This article utilizes basic epidemiological questions of who, what, where, when, why, and how, and explores their interactions with the CELEBRATIONS principles of Choice, Exercise, Liquid, Environment, Belief, Rest, Air, Temperance, Integrity, Optimism, Nutrition, Social Support, and Services. By exploring the nexus between these two perspectives, the authors propose unique biblical concepts that contribute to understanding the COVID-19 pandemic and go beyond the public health perspective.

Keywords: COVID-19, Pandemic, Public Health, Bible, CELEBRATIONS, Seventh-day Adventist

1. Background

The COVID-19 pandemic caused by SARS-CoV-2¹ originated in Wuhan, China.² Despite the guidelines issued by the World Health Organization

¹ Ben Hu et al., "Characteristics of SARS-CoV-2 and COVID-19," *Nature Review Microbiology* 19.3 (2021): 141–54, doi:10.1038/s41579-020-00459-7.

² "Origins of the SARS-CoV-2 Virus," World Health Organization (WHO), March 30,

(WHO), aimed at slowing down the spread of the virus and keeping people safe, millions of deaths were recorded across countries and communities.³ As of August 27, 2023, there were 770 million confirmed cases and 6.9 million deaths.⁴ While the COVID-19 pandemic is not the first of its kind in history, its devastating effects on the social, economic, political, and spiritual well-being of individuals and communities have been tremendous. The impact on the global economy has led to job losses in many countries.⁵ Socially, families were separated, particularly at the early stage of the pandemic, and social services were disrupted.⁶ Politically, government institutions became dysfunctional.⁷ Spiritually, people's faith in God was challenged.⁸ Overall, the pandemic has had major effects at multiple levels of society and the global public health systems.⁹ Thus, examining the COVID-

2023, <https://www.who.int/health-topics/coronavirus/origins-of-the-virus>. See also K. G. Andersen et al. "The Origins of SARS-CoV-2: A Critical Review," *Cell* 184.4 (2021): 893–902, <https://doi.org/10.1016/j.cell.2021.02.002>.

- ³ "Keeping Health Workers Safe to Keep Patients Safe," World Health Organization, September 17, 2020, <https://www.who.int/news/item/17-09-2020-keep-health-workers-safe-to-keep-patients-safe-who>.
- ⁴ "Weekly Epidemiological Update on COVID-19," World Health Organization, September 1, 2023. (n.d.), <https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19--1-september-2023>.
- ⁵ Xueli Wei, Lijing Li, and Fan Zhang, "The Impact of the COVID-19 Pandemic on Socio-Economic and Sustainability," *Environmental Science and Pollution Research* 28.48 (2021), doi:10.1007/s11356-021-14986-0.
- ⁶ Pouya Hosseinzadeh et al., "Social Consequences of the COVID-19 Pandemic. A Systematic Review," *Investigacion y Educacion en Enfermeria* 40.1 (2022): 10, doi:10.17533/udea.iee.v40n1e10.
- ⁷ Matteo Bonotti and Steven T. Zech, "The Human, Economic, Social, and Political Costs of COVID-19," *Recovering Civility during COVID-19* (2021): 1–36, doi:10.1007/978-981-33-6706-7_1.
- ⁸ A. Büssing, Baumann, K. Surzykiewicz, "Loss of Faith and Decrease in Trust in a Higher Source during COVID-19 in Germany," *Journal of Religion and Health* 61.1 (2022): 741–66.
- ⁹ Y. Liu et al., "Challenges and Opportunities of a Global Health Crisis: The Management and Business Implications of COVID-19 from an Asian Perspective," *Asian Business & Management* 19.3 (2020): 277–97, <https://doi.org/10.1057/s41291-020-00119-x>. See also Stephanie M. Topp, "COVID-19 and Global Health Systems," in Sim et al., *The Routledge Handbook of Global Development* (London: Routledge, 2022), 455–68, doi: 10.4324/9781003017653-44; Giulia Parola, "Flaws of Global Health Governance as Illustrated by the COVID-19 Vaccine Distribution," *Culturas Jurídicas* 9.23 (2022), doi: 10.22409/rcj.v9i23.54728; D. Jato et al., "COVID-19 and Public Health in Africa: a Call for New Perspectives in Health System Strengthening," *Journal of Preventive and Rehabilitative Medicine* 4.1 (2022): 3–13, doi:10.21617/jpr m2022.412.

19 pandemic from both the public health and biblical perspectives may help broaden the conversation.

Throughout history, various forms of pandemics have affected people across the globe. These pandemics have included “plague, cholera, flu, severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV).”¹⁰ The COVID-19 pandemic stands in a long line of plagues that have disrupted humanity. The Plague of Justinian (541–543), Black Death (1347–1351), and Third plague (1885) were caused by fleas associated to wild rodents, while the first (1817–1824), second (1827–1835), third (1839–1856), fourth (1863–1875), fifth (1881–1886), sixth (1899–1923), and seventh (1961) cholera pandemics were as a result of exposure to contaminated water.¹¹ To create a balanced perspective, our article used basic epidemiological questions and CELEBRATIONS principles as conceptual and organizing frameworks to explore factors related to the COVID-19 pandemic from public health and biblical perspectives. Understanding the COVID-19 pandemic from both perspectives is critical to the development of comprehensive and effective interventions to address future pandemics.

2. The Public Health Perspective

The basic epidemiological questions of who, what, where, when, why, and how usually guide public health approaches to disease prevention and control.¹² Table 1 presents the epidemiological questions and how the corresponding answers help to understand sin from a public health perspective. The questions in the left column are the typical epidemiological questions.

3. The Biblical Perspective

The Bible describes the origin of humans and their fall into sin, resulting in the condition of struggle and hope for the future. In the beginning, God created a perfect universe (Genesis 1), and provided specific instructions on how humans should live and relate to the environment. However, when Adam and Eve violated the principles laid down by God (Gen 3:1–13) evil

¹⁰ J. Piret and Boivin G. “Pandemics Throughout History: Frontier in Microbiology,” *Front Microbiology* 15:11:631736 (2021), doi: 10.3389/fmicb.2020.631736.

¹¹ Piret and Boivin, “Pandemics Throughout History.”

¹² European Centre for Disease Prevention and Control, *Questions and Answers on COVID-19: Basic Facts*, June 12, 2023. <https://www.ecdc.europa.eu/en/covid-19/questions-answers/questions-answers-basic-facts>.

befell the world (Rom 8:22–23). The effects of sin can be seen in the physical (Gen 3:16–19), social (Gen 4:8–16; Gal 5:19–21), economic (2 Kgs 6:24–29), political (Isa 1:23; Rom 13:1–2), biological (Rom 5:12), and spiritual spheres (Rom 3:23; 6:23). Table 1 presents the epidemiological questions and how the corresponding answers help to understand the biblical concept of sin from a public health perspective.

Table 1: *Epidemiological questions and answers from public health and biblical perspectives*

Question	Public health answer	Biblical answer
What is the problem? (causative agent)	COVID-19 pandemic	Sin/fallen world
Who is affected? (person)	Humans	Humans, animals, environment/planet
Where? (place)	North America, South America, Africa, Europe, Asia, Oceania, etc.	Eden, earth
When? (time)	2019 to present	At birth, through life
Why/how? (causes, risk factors, mode of transmission)	Contact, droplet, air-borne, fomite, biological samples, fecal-oral, bloodborne, mother-to-child, and animal-to-human transmission, etc. ¹³	Inherited sinful nature, ¹⁴ sin against humans, environment, and God

3.1 Public Health and Biblical Perspectives: Connecting the Dots

The World Health Organization defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”¹⁵ However, the COVID-19 pandemic distorted the state of health and life of individuals, families, communities, and nations. Public health

¹³ “Scientific Brief on Transmission of SARS-CoV-2: Implications for Infection Prevention Precautions,” World Health Organization, July 9, 2020, <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>.

¹⁴ Ellen G. White, *The Desire of Ages* (Mountain View, CA: Pacific Press, 1898), 671. See also George R. Knight, *Sin and Salvation: God’s Work for Us and in Us* (Hagerstown, MD: Review and Herald, 2008), 35.

¹⁵ World Health Organization Constitution, 1948.

played a crucial role in addressing the COVID-19 pandemic by using the key prevention and control approaches (a-e) listed by Winslow (1920) in his definition of public health:

A science and art of preventing disease, prolonging life and promoting health and efficiency through organized community effort for (a) the sanitation of the environment; (b) the control of communicable infections; (c) the education of the individual in personal hygiene; (d) the organization of the medical and nursing services for the early diagnosis and preventive treatment of diseases; and (e) the development of the social machinery to insure everyone a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birth-right of health and longevity.¹⁶

In addition to describing the spiritual implications of the fall in the Garden of Eden, the Bible provides a descriptive history of sin's work on earth. Part of that history is the occurrence of disease and pestilence. The Bible has a rich vocabulary to describe disease outbreaks, for example, pestilence (Deut 28:2), plague (Exod 11:1), boils (Exod 9:8-9), leprosy (Lev 13:2), and fever (Deut 28:22). These outbreaks were described variously as natural results of sin (Rom 6:23, Ps 103:2-3, Prov 14:30), the result of violations of health laws prescribed by God (Exod 15:26, Lev 11), and as punishment for sin and rebellion (Deut 28:15, 22, 27-28, 35).

The Bible associates some diseases and pandemics with sin or disobedience, particularly in the context of God's judgment in specific historical instances. However, not all disease outbreaks, such as the COVID-19 pandemic, should be directly linked to personal sin, as they are often the result of natural causes within a fallen, broken world. While sin is the root cause of suffering and death, we may recognize that pandemics like COVID-19 are complex events arising from both natural and human factors, and they reflect the broader brokenness of creation.

The struggle with disease and the need for public health started with the fall of Adam and Even in the Garden of Eden.¹⁷ But even in their state of sin, God began to reveal principles of health to His children to help address and

¹⁶ Egwu IN, "PHC System in Nigeria: Theory, Practice and Perspectives" (Lagos: Elmore Press, 1996), in Winslow CEA, *The Untilled Fields of Public Health* (New York: AAAS, 1920). Winslow's definition, though old, seems to provide a comprehensive overview of the what, why, when, where, and how of public health.

¹⁷ Godwin N. Aja, "Biblico-Historical Foundations of Public Health: An Adventist Perspective," *Christ in the Classroom* 28 (2002): 19-37. http://christinthe classroom.org/-vol_28/28cc 019-037.htm.

mitigate the impacts of sin. The CELEBRATIONS principles (Choice, Exercise, Liquid, Environment, Belief, Rest, Air, Temperance, Integrity, Optimism, Nutrition, Social Support, and Services) promoted by the Seventh-day Adventist Church, encapsulate public health and biblical principles that can be used as a template for addressing the COVID-19 pandemic from the two perspectives. Below is a brief example of how each of the CELEBRATIONS principles relates to the COVID-19 pandemic from public health and biblical perspectives.

3.1.1 Choice

During pandemics, individuals, families, communities, and institutions make public health choices. The choice to obey or not obey the COVID-19 pandemic governmental guidelines and regulations plays a vital role, to a large extent, in whether one contracts the disease or not. From the biblical perspective, choice-making is a fundamental human right and every choice made has physical, social, mental, and spiritual consequences. The Bible reports that humans made a choice in the Garden of Eden, and the result was devastating. Even though God is all-knowing, His loving nature prevented Him from stopping Adam and Eve from making their own paradigm-changing decision. That choice had a dramatic impact on the entire human race. Individuals typically reflect on their lives and priorities during tough times (2 Chr 7:13–14). Some people have turned to their faith during the pandemic for comfort and direction, as the Bible instructs us to do in trying times.¹⁸

Importantly, the choices we make during a pandemic do not only affect our own health but also the health of others. The decision to follow health guidelines is not merely a personal one—it has a social dimension. The act of wearing a mask, avoiding crowded spaces, and adhering to social distancing rules can prevent the spread of the virus, protecting those who are vulnerable or at higher risk. This reflects the biblical principle of loving one's neighbor (Matt 22:39). In the same way, the apostle Paul in 1 Cor 10:24 teaches that “no one should seek their own good, but the good of others.” In the context of a pandemic, personal choices directly impact the well-being of the community. Choosing to act in ways that protect others, especially

¹⁸ M. Ivanova and S. Dzhoubrova, “Religious Views and Religious Struggles in The Context of the COVID-19 Pandemic,” *Psychological Research* 25.2 (2021), <https://doi.org/10.7546/PsyRB.2022.25.02.05>.

the most vulnerable, aligns with biblical teachings about selflessness and loving others as we love ourselves.

3.1.2 Exercise

Public health promotes the physical well-being of individuals, families, and communities. Physical activity played a crucial role during and beyond the COVID-19 pandemic.¹⁹ Regular exercise can enhance immune function, potentially reducing the risk and severity of respiratory infections.²⁰ From the biblical perspective, the human body which is the temple of the Holy Spirit needs to be safeguarded (1 Cor 6:19–20). Engaging in physical exercise is one of the ways to safeguard the body.²¹ According to Ellen G. White, “The whole body is designed for action, and unless the physical powers are kept in health by active exercise, the mental powers cannot long be used to their highest capacity.”²²

However, while exercise and physical fitness offer numerous health benefits, including improved immune function and a lower risk of chronic diseases, they do not provide immunity against viral infections like COVID-19. Even individuals who were athletes or exercised daily remained susceptible to the virus before the availability of vaccines, as COVID-19 is primarily transmitted through respiratory droplets, and factors like viral load, exposure, and individual health responses play significant roles in determining who contracts the disease. While regular exercise can help reduce the severity of illness and enhance recovery, it does not prevent infection entirely, especially in the face of a novel virus like SARS-CoV-2.

¹⁹ T. J. Yeo, “Sport and Exercise During and Beyond the COVID-19 Pandemic,” *European Journal of Preventive Cardiology* 27.12 (2021): 1239–41.

²⁰ Martin A. J, “Motivation and Engagement Across the Academic Life Span: A Developmental Construct Validity Study of Elementary School, High School, and University/College Students,” *Educational and Psychological Measurement* 69.5 (2009): 794–824, <https://doi.org/10.1177/0013164409332214>.

²¹ C. Tracey Greenwood and Teresa Delgado, “A Journey Toward Wholeness, a Journey to God: Physical Fitness as Embodied Spirituality,” *Journal of Religion & Health* 52.3 (2013): 941–54, doi:10.1007/S10943-011-9546-9. Paul also said in 1 Tim 4:8: “Physical training is good, but training for godliness is much better, promising benefits in this life and in the life to come.”

²² Ellen G. White, *Education* (Mountain View, CA: Pacific Press, 1903), 207.

3.1.3 Liquid

Water intake is an important health requirement. Regular use of clean water to replenish what is discharged through urine, sweat, etc., is vital to ensure good health. Ensuring access to safe drinking water is of paramount importance for health and well-being.²³ Biblically, water symbolizes life (John 4:14) and functions as a cleansing agent (Lev 16:4, 24; 17:15).

Though regular hydration with clean water is essential for maintaining good health, as it helps replenish fluids lost through urine, sweat, and other bodily functions, the consumption of sweetened beverages such as sodas and sugary juices can negatively impact immune function. These drinks, high in added sugars, can contribute to chronic inflammation, impair immune responses, and increase susceptibility to infections, including viral diseases like COVID-19. Research has shown that excess sugar intake can weaken the immune system, making the body less effective at fighting off pathogens and heightening the risk of severe illness when exposed to viruses.²⁴

3.1.4 Environment

The environment and COVID-19 are connected.²⁵ Proper hygiene practices, including handwashing and cleaning utensils, are critical in preventing the transmission of communicable diseases. Studies have shown that hand hygiene can reduce the spread of infections like COVID-19, the flu, and gastrointestinal diseases.²⁶ Similarly, cleaning and disinfecting utensils and surfaces help prevent foodborne illnesses caused by bacteria such as *Salmonella* and *E. coli*.²⁷ Inadequate sanitation, on the other hand, can lead to outbreaks

²³ M. Langone et al., "SARS-CoV-2 in Water Services: Presence and Impacts," *Environmental Pollution* 268 (2021): 115806, doi: 10.1016/j.envpol.2020.115806.

²⁴ J. Skrha and M. Prusik, "The Impact of Excessive Sugar Intake on the Immune System and Chronic Diseases," *European Journal of Clinical Nutrition* 70.2 (2016), 123–29, <https://doi.org/10.1038/ejcn.2015.162>. See also L. Jiang et al., "The Role of Inflammation in COVID-19 and its Impact on Immune Response," *International Journal of Infectious Diseases* 97 (2020), 332–38, <https://doi.org/10.1016/j.ijid.2020.06.057>.

²⁵ D. Barcelo, "An Environmental and Health Perspective for COVID-19 Outbreak: Meteorology and Air Quality Influence, Sewage Epidemiology Indicator, Hospitals Disinfection, Drug Therapies and Recommendations," *Journal of Environmental Chemical Engineering* 8.4 (2020): 104006, doi:10.1016/j.envpol.2020.115806.

²⁶ "Handwashing: Clean Hands Save Lives," Centers for Disease Control and Prevention (CDC) (2020), <https://www.cdc.gov/handwashing/index.html>.

²⁷ World Health Organization, 2020.

of waterborne diseases like cholera and typhoid, emphasizing the importance of hygiene in disease prevention (WHO, 2021).

The Bible is clear on the role humans play in the care of the environment (Gen 2:15) and prevention of diseases (Exod 15:26; Lev 13:46; Prov 3:7–8; 1 Cor 6:18). God gave ancient Israel detailed instructions on sanitation practices to keep their environment clean (Deut 23:1–14). In his comment on Deut 23:12–14, Nwaomah notes that “Jews who obeyed these godly instructions during the time of the black plagues were not affected in the same ways as others. Their obedience to God gave them a degree of immunity in a way no one can at the time [explain].”²⁸ According to Ellen G. White, “plenty of sunlight ... [is] essential ... to the cheerfulness and vigor of the inmates of the home.”²⁹

3.1.5 Belief

The Health Belief Model is widely used in public health research and practice to explore an individual’s belief system in relation to disease susceptibility, severity, benefits, barriers, cues to action, and self-efficacy.³⁰ People who believe COVID-19 conspiracy theories are less likely to want the vaccine and to support measures to stop the virus.³¹ From the biblical perspective, constant dependence upon God, who designed the human body and environment, is a safeguard to a life of health free from COVID-19. Religious beliefs and interpretations can strongly affect people’s thoughts about vaccines.³²

Moreover, religious beliefs and interpretations can strongly shape how people perceive health crises like the COVID-19 pandemic. Believers may

²⁸ S. M. Nwaomah, “Religion and Environment,” *Religion and Society* (Nigeria: Babcock University Press, 2012), 97–108.

²⁹ Ellen G. White, *Ministry of Healing* (Mountain View, CA: Pacific Press, 1942), 276.

³⁰ Irwin M. Rosenstock, “Historical Origins of the Health Belief Model,” *Health Education Monographs* 2.4 (1974): 328–35, doi:10.1177/109019817400200403.

³¹ V. A. Earnshaw et al., “COVID-19 Conspiracy Beliefs, Health Behaviors, and Policy Support,” *Translational Behavioral Medicine* 10.4 (2020): 850–56.

³² T. S. Netshapapame, “COVID-19 Vaccination Hesitancy in South Africa: Biblical Discourse,” *HTS Theological Studies* 79.4 (2023): 1–7. See also Vjetkovic Smiljana et al., “Do Religious People in Western Balkans have Faith in COVID-19 Vaccines?,” *European Journal of Public Health* (2022), doi:10.1093/eurpub/ckac131.359; Ozan Kuru et al., “Religious Affiliation and Philosophical and Moral Beliefs about Vaccines: A Longitudinal Study,” *Journal of Health Psychology* 27.13 (2022), doi: 10.1177/13591053221082770.

feel guided by their faith to trust in God's plan rather than relying on conspiracy theories or fear-driven narratives.

3.1.6 *Rest*

Physical and mental rest are critical to vibrant health. The human body needs adequate rest each day. About eight hours of sleep is good for effective living. Getting enough good sleep helps the immune system and can reduce the harm caused by stress from COVID-19.³³ The Bible promotes rest in two mutually reinforcing dimensions—continual spiritual rest and weekly Sabbath rest. Matthew 11:28–30 speaks of the perfect rest that comes from the peace that God provides through a relationship with Him and obedience to His words. Similarly, the weekly Sabbath rest in the Bible allows man to cease from work to rest and spend time communing with God. With this weekly Sabbath rest, God offers a physical, spiritual, and social reminder of His goodness and wholistic care for humankind. In these two dimensions of rest, Jesus's admonishment to His disciples to come aside and rest for a while," (Mark 6:31) displays His care for human well-being.

Moreover, Christ's words in Mark 6:31, when He invited His disciples to come away and rest, exemplify the importance of periodic rest from work and ministry. During the COVID-19 pandemic, many people found solace in taking moments to rest in God, even amid widespread uncertainty, loss, and anxiety. The pandemic created a global sense of chaos, but for many believers, trusting in God's peace provided a sanctuary of rest that helped them cope with stress and fear. In these times, the peace that surpasses all understanding (Phil 4:7) became a refuge, demonstrating that rest in God can bring a sense of hope and renewal despite external circumstances.

3.1.7 *Air*

Pure air is essential for maintaining good health, as it provides the oxygen that the body needs for proper functioning. Oxygen is critical for cellular processes, and the quality of the air we breathe can significantly impact overall health. The quality of indoor air plays an important role in the spread of respiratory diseases, including COVID-19.³⁴ As a result, the use of masks was advised for protection during the pandemic. Poor ventilation

³³ K. K. Gulia and V. M. Kumar, "Importance of Sleep for Health and Wellbeing Amidst COVID-19 Pandemic," *Sleep and Vigilance* 4.1 (2023): 49–50.

³⁴ M. Z. Abouleish, "Indoor Air Quality and COVID-19," *Public Health* 191.1 (2021).

and high concentrations of viral particles in enclosed spaces can increase the likelihood of transmission. Research has shown that the virus can linger in the air in certain conditions, emphasizing the importance of good air circulation and filtration to reduce the risk of infection.³⁵

In the Bible, the air we breathe is recognized as a gift from God, affirming the sanctity and importance of life-giving breath. In Gen 2:7, it is written that “the LORD God formed a man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being” (NIV). This verse not only highlights God’s role as the Creator but also underscores the vital importance of the air (breath) that sustains life. Thus, the air we breathe is seen as a divine provision, and we are reminded of its significance in sustaining life.

As the world faces challenges such as COVID-19, which is primarily transmitted through respiratory droplets and airborne particles, it is crucial to recognize the role that air quality plays in public health. Ensuring access to clean air, through proper ventilation, air filtration, and outdoor exposure, is an important aspect of disease prevention. The Bible’s recognition of God’s provision of breath as metaphor of the life He has given us serves as a reminder of the need to value and protect the air that sustains.

3.1.8 Temperance

Public health practice emphasizes moderation in all human activities. Avoiding the use of dangerous substances and judicious use of non-harmful foods is essential for healthful living. Temperance, such as prudence and self-regulation, can assist people with chronic conditions and disabilities in dealing with stress caused by the COVID-19 pandemic.³⁶ The Bible promotes total abstinence from all things that are harmful, and moderation in things that appear harmless (Gal 5:23).

One of the most pertinent aspects of public health during the COVID-19 pandemic was the increased risk associated with the use of substances such as alcohol and tobacco. Research has shown that use of these substances can

³⁵ L. Morawska and J. Cao, “Airborne Transmission of SARS-CoV-2: The World Should Face the Reality,” *Environment International* 139 (2020), 105730, <https://doi.org/10.1016/j.envint.2020.105730>.

³⁶ E. Umucu et al., “The Protective Role of Character Strengths in COVID-19 Stress and Well-being in Individuals with Chronic Conditions and Disabilities: An exploratory Study,” *Rehabilitation Counseling Bulletin* 64.2 (2021): 67–74.

lead to worsened outcomes for individuals who contract COVID-19. Tobacco use has been linked to weakened immune function, respiratory complications, and an increased risk of severe disease progression when combined with COVID-19. Smokers are at greater risk of developing complications such as pneumonia, acute respiratory distress syndrome (ARDS), and long-term lung damage. Alcohol use, on the other hand, can impair immune responses and increase vulnerability to viral infections. In addition, excessive alcohol consumption has been shown to exacerbate underlying health conditions such as liver disease, cardiovascular issues, and mental health disorders, all of which can worsen the prognosis for COVID-19 patients. Studies have also indicated that substance use disorders are linked to higher mortality rates from COVID-19, as these conditions can further compromise the body's ability to fight the virus and recover from its effects. Therefore, moderation and the avoidance of harmful substances are crucial for reducing the risk of severe COVID-19 outcomes and improving overall health during the pandemic.³⁷

3.1.9 Integrity

Biblical perspectives on integrity, such as aligning one's words with actions and upholding moral values, provide a solid foundation for leaders to guide their communities through difficult times with honesty and trustworthiness.³⁸ With the surge of misinformation during the pandemic, especially on social media platforms, individuals had to decide which sources to trust. Social media's algorithmic bias towards sensational content led to the rapid spread of false information, and individuals who are predisposed to believe certain narratives may have been more susceptible to accepting conspiracy theories.³⁹ Public health efforts must account for these belief systems and work to provide clear, factual information while respecting the diverse

³⁷ "Tobacco and COVID-19: Preventing and mitigating the adverse health impacts of tobacco use in the context of the COVID-19 pandemic," World Health Organization (2020), <https://www.who.int>. See also "COVID-19 and Alcohol Use Disorder: What You Need to Know," National Institute on Alcohol Abuse and Alcoholism (NIAAA) (2020), <https://www.niaaa.nih.gov>.

³⁸ D. DeWitt, "Actions Speak Louder Than Words, or Do They? A Look at the Power of Words and Actions in Christian Leadership," in Bruce E. Winston, *The Mind of a Leader: A Christian Perspective of the Thoughts, Mental Models, and Perceptions that Shape Leadership Behavior* (Cham: Springer International Publishing, 2022), 31–42.

³⁹ I. Rosenstock Irwin, "The Health Belief Model and Preventive Health Behavior," *Health Education Monographs* 2.4 (1974): 354–86. <http://www.jstor.org/stable/45240623>.

worldviews of individuals. Maintaining integrity in public health communication during the COVID-19 pandemic was paramount as misinformation spread rapidly.⁴⁰ The integrity principle serves as a beacon of hope and stability amidst the uncertainties of the pandemic. During pandemics, it is necessary to ensure that information comes from trusted authorities like the World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), or local health departments. Further, integrity compels the avoidance of amplifying rumors while actively sharing accurate, science-based information to counter misinformation. Integrity also means engaging with empathy and clarity in constructive discussions, and correcting misunderstandings, when false information is encountered.

3.1.10 Optimism

Greater social support and optimism are linked to reduced levels of depression and generalized anxiety among healthcare workers.⁴¹ Optimism, rooted in hope and patience, becomes an essential element for sustainable leadership in uncertain times, such as the COVID-19 era.⁴² Optimism and gratitude are related, and they have a positive impact on the immune system.⁴³ Thus, gratitude during a chaotic time such as a pandemic, can be protective. Repeatedly throughout the Bible, the principle of optimism is widespread, encouraging faith in God no matter the circumstances, based on the concept that God is aware of and concerned about human problems, and that when we are with Him eternally, human suffering will come to an end (Rev 21:4).

⁴⁰ J. Zarocostas, "How to Fight an Infodemic," *The Lancet* 395.10225 (2020): 676.

⁴¹ C. Schug et al., "Social Support and Optimism as Protective Factors for Mental Health among 7765 Healthcare Workers in Germany during the COVID-19 Pandemic: Results of the VOICE Study. *International Journal of Environmental Research and Public Health* 18.7 (2021): 3827.

⁴² S. Waldner, "Sustainable Leadership: How the Virtues of Hope and Patience can become Essential Elements for Resilience in Uncertain Times," *Scandinavian Journal for Leadership and Theology* 10 (2023): 299–314.

⁴³ "Expressing gratitude makes us healthier: Who wouldn't be grateful for that? Science-Daily," National Communication Association (April 11, 2017), <https://www.science-daily.com/releases/2017/04/170411104712.htm>.

3.1.11 Nutrition

Knowledge about diet and food choices changed because of the pandemic.⁴⁴ Individuals with pre-existing health conditions and the elderly, who are more vulnerable to COVID-19 can benefit from a diet rich in essential nutrients to bolster their immune systems.⁴⁵ Plant-based foods such as vegetables, fruits, legumes, and nuts constitute the original diet God recommended to man (Gen 1:29). They are known to contain the required vitamins, minerals, proteins, carbohydrates, fats, and oil.

3.1.12 Social Support and Services

There is a complex relationship where social support positively influences mental health, partially mediated by resilience, and moderated by age group.⁴⁶ The Bible commands us to support one another, especially the vulnerable (Matt 25:35–40). The biblical idea of caring for others is relevant in times of crisis.⁴⁷ In the Bible, Paul admonishes Christians to “bear one another’s burdens” (Gal 6:2). The early Christians’ actions of caring for the sick, practicing charity, and demonstrating solidarity during epidemics align with the principles of social support and services found in the Bible.⁴⁸

However, the social isolation induced by COVID-19, though necessary for controlling the spread of the virus, created significant challenges, particularly for vulnerable populations such as the elderly and young people. Elderly individuals in nursing homes and young people experiencing developmental milestones were particularly affected. The elderly often faced increased isolation due to strict visiting restrictions, which compounded

⁴⁴ A. Folorunso et al., “Nutritional Knowledge and Immunity-boosting Food Consumption Patterns before and after the COVID-19 Pandemic Lockdown Periods in Osun State, Nigeria,” *Nutrition and Health* 28.4 (2022): 761–69.

⁴⁵ L. Octavia and J. Harlan, “The Role of Nutrition the COVID-19 Pandemic,” *International Journal of Public Health* 10.2 (2021): 304–10.

⁴⁶ T. Hou, “Social Support and Mental Health among Health care Workers during Coronavirus Disease 2019 outbreak: A Moderated Mediation Model,” *Plos One* 15,5 (2020): e0233831.

⁴⁷ Sandro Galea, Raina M Merchant, and Nicole Lurie, “The Mental Health Consequences of COVID-19 and Physical Distancing: The Need for Prevention and Early Intervention,” *JAMA Internal Medicine* 180.6 (2020): 817–18, doi:10.1001/jamainternmed.2020.1562.

⁴⁸ A. Justice Arthur, “Visions of Church Life in the Post COVID–19 Era: Analysis and Proposal,” *Daniel Institute* (2021): 1–15, https://ocw.danielinstitute.net/media/uploads/researches/research_20210801184542_4dc546dc98.pdf.

feelings of loneliness and despair. Young people, on the other hand, were deprived of crucial social interactions during key stages of their development, which led to feelings of anxiety, depression, and disconnection from others. These disruptions to social connectivity had significant mental health consequences for both groups. The Bible speaks to these challenges as well, emphasizing the importance of connection and community, as seen in passages like Heb 10:24–25, which encourages believers to “not give up meeting together” but to “spur one another on toward love and good deeds” (NIV).

The mental health impact of social isolation during the pandemic underscores the importance of social support networks in promoting resilience and well-being.⁴⁹ The Bible encourages Christians to provide emotional and social support, recognizing that in times of crisis, the need for community care and mutual support is paramount. Just as the early church responded to crises with acts of solidarity and care, believers today are called to respond to the mental health crisis caused by the pandemic with compassion, understanding, and practical support for those in need.⁵⁰

4. Conclusion

The COVID-19 pandemic has been a significant global event that has affected every aspect of human life—physical, social, economic, political, and spiritual. As we move forward, it is crucial to reflect on the profound impact this pandemic has had on individuals, communities, and institutions. This article aimed to explore the intersection of public health and biblical perspectives to better understand the pandemic and to guide future responses to similar crises. By employing the basic epidemiological questions (who, what, where, when, why, and how) and the CELEBRATIONS principles (Choice, Exercise, Liquid, Environment, Belief, Rest, Air, Temperance, Integrity, Optimism, Nutrition, Social Support, and Services), this article explored how both scientific and spiritual approaches offer complementary insights into the complexities of the pandemic.

From a public health standpoint, the COVID-19 pandemic has underscored the importance of prevention, preparedness, and response strategies in mitigating the spread of infectious diseases. The use of frameworks like

⁴⁹ “The Impact of Social Isolation on Mental Health During COVID-19,” National Institutes of Health (NIH) (2020), <https://www.nih.gov>.

⁵⁰ “Social Support and Mental Health: How Social Connections Affect Well-Being,” Harvard T. H. Chan School of Public Health (2020), <https://www.hsph.harvard.edu>.

the CELEBRATIONS principles emphasizes the importance of individual choices, lifestyle factors, and community support systems in influencing health outcomes. Public health models have demonstrated the critical need for scientific research, data-driven decision-making, and effective communication to combat future pandemics. These frameworks emphasize the multifactorial nature of disease outbreaks, which are influenced not only by pathogens but by environmental, behavioral, and social determinants of health.

However, the biblical perspective offers something unique in this context—an understanding of human suffering, resilience, and hope rooted in faith. The Bible provides an essential framework for moral reflection, offering spiritual principles that guide individuals and communities through times of crisis. It provides a framework for understanding the spiritual dimensions of health—how obedience to God, rest, care for others, and trust in divine providence can shape responses to suffering and illness. As seen in scriptural teachings, humans are encouraged to rely on God during times of crisis, seeking spiritual solace and comfort through prayer, community support, and obedience to God’s word (Matt 11:28–30; Gal 6:2). The example of early Christian care for the sick during pandemics further underscores the biblical mandate to show compassion, solidarity, and practical love toward those suffering.

This article underscores the point that while public health measures are vital for controlling pandemics, the biblical principles offer deep insights into the spiritual and emotional aspects of dealing with such crises. The pandemic has revealed the need for holistic health approaches—those that integrate physical, mental, and spiritual health. The biblical perspective contributes to this discussion by providing a framework for understanding suffering, coping with uncertainty, and maintaining hope in the face of adversity. It reminds us that our choices matter not only for our health but also for the health of our communities. The lessons learned from the pandemic should inspire both public health strategies and spiritual responses that prioritize compassion, resilience, and community care. Going forward, it is essential that we consider the spiritual dimension alongside the physical and social factors when preparing for future health crises, ensuring a balanced approach that fosters both well-being and spiritual growth in times of uncertainty.