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# Health Practices and Prevention of COVID-19 in San Antonio, Duero, Bohol

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#### ABSTRACT

Health practices refer to individuals' role in maintaining health and preventing diseases (Weldekidan, 2022). The COVID-19 pandemic has dramatically impacted the community, affecting people's lives and health. Adhering to health practices imposed by the Department of Health is vital to prevent the spread of the virus. This study utilized the descriptive quantitative research design aided by a self-made questionnaire. The tool was subjected to Cronbach's Alpha test, obtaining a result of 0.765 for the Lifestyle and 0.826 for the preventive measure. The instrument was distributed via an online platform to one hundred randomly selected residents of San Antonio, Duero, Bohol, from 18 years old and above, to determine their health practices used in preventing the spread of COVID-19 infection. Results revealed that the majority of the respondents had "Very good health practices" in terms of preventive measures; and had" good health practices" in terms of Lifestyle. Data was further subjected to the Spearman rho test and chi-square test and revealed a significant relationship between the Age and level of health practices; and between purok where the respondents live and the level of health practices.

**Keywords:** Health Practices, Lifestyle, Preventive Measures; Quantitative Design, Bohol, Philippines

#### INTRODUCTION

In late 2019, a novel coronavirus, SARS-CoV-2, was reported as the cause of a pandemic of acute respiratory illness in Wuhan, China's Hubei province. The disease was named as COVID-19, which stands for coronavirus disease 2019. The clinical manifestations of the 2019-nCoV infectious disease range from asymptomatic to very severe pneumonia with respiratory distress, septic shock, and multi-organ failure, which can lead to death and which was declared as a public health emergency on January 30, 2020. It began characterizing it as a pandemic in March 2020 to emphasize the gravity of the situation and urge all countries to detect infection and prevent its spread (Jiang, Deng, Zhang, Cai, Cheung, & Xia, (2020).

COVID-19 disease spreads primarily from person to person through air droplets produced when coughing or sneezing. Those other droplets may land throughout the nose and mouth or noses of people nearby or be inhaled into the lungs. Contact with contaminated fomites and inhalation of aerosols produced during aerosol-generating procedures are two ways to transmit coronaviruses. Transmission of SARS-CoV-2 from asymptomatic individuals (or those in the incubation period) has also been reported. However, its severity is unknown (Lotfi, Hamblin & Rezaei, 2020). Early screening, diagnosis, isolation, and treatment are required to prevent further spread. Preventive strategies include patient isolation, infection control, and suitable measures to care for an infected patient (Güner, Hasanoğlu & Aktaş, 2020).

However, despite the repeated emphasis on observing minimum health practices by the Department of Health, several individuals still fail to comply with the reminders. This has been noted especially in people living in rural areas where it has been reported that adherence to the minimum health standards will only be done with the presence of authorities and health personnel.

COVID-19 is a contagious disease. Several studies have pointed out that one of the ways of contracting the disease is through the inhalation of droplet sprays or touching contaminated materials. One way of preventing its spread is by manipulating the environment, which is emphasized in the theory of Florence Nightingale.

Environmental factors influence patients in ways that matter to their circumstances and illnesses. Health professionals must address these factors in caring for the individual patient and their needs. The Department of Health (DOH) has introduced to the public the different ways of preventing COVID-19 infection by manipulating the environment to make it virus free through proper handwashing and observing good etiquette when sneezing and coughing while maintaining clean air. A clean environment is essential to one's health. The nurse's role in a patient's recovery is to gradually change the environment to develop the optimum condition for the patient's

body to cure itself (Petiprin, 2020). Nursing aims to put the patient in the best possible State for nature to take its course.

Nola Pender's created the Health Promotion Model that incorporates health-improving behaviors applicable throughout the lifespan. Its goal is to help nurses learn about and understand the significant determinants of health behaviors to use behavioral counseling to promote well-being and healthy lifestyles. According to Pender's health promotion model, health is defined as a dynamic state rather than simply the absence of disease. Health promotion aims to improve a client's overall well-being. It describes the multidimensional nature of people as they interact with their surroundings to achieve health (Wilson, 2021). One of the nurse's duties is to teach patients how to care for themselves and make healthy decisions. Residents of San Antonio Duero, Bohol, can prevent illnesses and diseases and improve their overall health through self-care.

Jean Watson's Theory of Transpersonal Caring is also related to Nola Penders's Health Belief Model. It was emphasized in the transpersonal caring theory that nursing is concerned with the promotion of health, prevent illness, caring for the sick, and restoring health. Its primary concerns are how nurses care for their patients and how that care contributes to improved plans to promote health and well-being, cure diseases, and restore health. It focuses on both health promotion and disease treatment. Compassion is also at the heart of nursing practice and promotes health more effectively than a simple medical cure (Watson & Woodward, 2010).

Caring is an important aspect when taking care of COVID-19 patients. People infected with COVID-19 are struggling not only physically but mentally as well. Nurses taking care of these patients are also risking the health and the health of their loved ones. But the empathy and the genuine care nurses provide to patients without discrimination is the core of Transpersonal Caring.

The Sustainable Development Goals (SDGs) number 3, which emphasizes in health and well-being of every human being, is an essential legal basis that guides this study. On this goal, the World Health Organization (WHO) is firmly committed to helping stop the Covid-19 pandemic. The UN opened its doors to humanitarian efforts to deliver aid to needy countries and passed Resolution 74/270, which called for "intensified international cooperation to contain, mitigate, and defeat the pandemic." To help contain, mitigate, and defeat the pandemic, the Republic Act No. 11469, known as the "Bayanihan to Heal as One Act," was created. This Act asserts a national emergency due to a coronavirus disease 2019 (COVID-19) situation and establishes a national policy. This covers the issuance of Presidential Proclamation No. 929, Section 2020, declaring the Philippines to be in the State of Calamity and imposing an Enhanced Community Quarantine throughout Luzon. To further protect the people's health, safety, security, and lives during the pandemic, Republic Act (RA) No. 11332, entitled "Law on Reporting of Communicable Diseases," is also activated (WHO).

Article II of Section 15 of the 1987 Philippine Constitution indicates that the State shall protect and promote the people's right to health and instill health consciousness. This mandates the creation of the Inter-Agency Task Force (IATF) to prevent and reduce the entry of suspected or confirmed patients into the country. The Municipality of Duero, Bohol, issued an Office Memorandum no. 013 - 2021, last April 21, 2021, on temporarily suspending outdoor operations and indoor activities effective April 22, 2021. Failure to follow the order is subject to revocation of Business Permits for the aforesaid indoor activities' operators. The concerned authorities may impose sanctions and penalties for violators.

The 2019 coronavirus disease (COVID-19) pandemic threatens the mental health of societies. Many people feel fear, anxiety, depression, and other psychological effects (Tee, M. Tee, C. Anlacan, Aligam, Reyes, Kuruchittham & Ho 2020), especially when the World Health Organization (WHO) declared the COVID-19 outbreak a health emergency international concern and a pandemic. The disease was regarded as a significant health crisis that recently appeared as one of humanity's most serious challenges associated with adverse mental health consequences (Rajkumar, 2020). It causes mild illness in most patients, but diabetic patients are at a higher risk of severe disease (El Zowalaty & Järhult, 2020).

The pandemic has made an unprecedented number of people medically and socially vulnerable. Mortality rates related to COVID-19 have increased, and the scientific community is working hard to find molecular targets, protein sequences, and polymorphisms in SARS-CoV-2 to help patients' clinical evolution and survival (de Goés, Cardoso, Tavares, do Monte & Melo, 2020). In addressing these health outcomes, healthcare providers play an essential role (Pfefferbaum & North, 2020).

Detecting more COVID-19-positive patients in the community with increased testing capacity will also reduce secondary cases with stricter guarantine rules (Guner et al., 2020). Countries in the world have implemented a set of approaches to slow the spread of the coronavirus, including school and institutional closures, lockdowns, and targeted guarantine for suspected infected individuals (Sohrabi, Alsafi, O'neill, Khan, Kerwan, Al-Jabir & Agha, 2020). Slowing down the spread of the infection also helps the healthcare delivery system to function adequately. As a result, several countries have implemented restrictive measures to prevent the spread of the disease (Izzetti, Nisi, Gabriele & When the number of confirmed cases exceeds the Graziani, 2020). most optimistic estimates daily, it causes severe damage and overload in healthcare infrastructure (Monte, Tavares, Cardoso, Goes & Silva, (2020). Protecting health professionals is fundamental to preserving the lives of those who work directly with COVID-19 patients. Since infected people can spread the virus through aerosols and droplets from the respiratory system, it is therefore critical to limit the effects of virus diffusion through frequent hand hygiene, observing social distancing, and isolation of infected individuals. Patients with suspected coronavirus disease 2019 (COVID-19) can potentially infect others anytime, including during transfer and transportation. The healthcare team should wear personal protective equipment (PPE) when transferring or handling suspected COVID-19 patients to reduce the risk of infection (World Health Organization, 2020). Properly using a facial mask will also help prevent the virus from spreading (Lai, Shih, Ko, Tang & Hsueh, 2020), including the use of cleaning products, antiseptics, and hand sanitizers to avoid SARSCoV2 transmission (Gharpure, Hunter, Schnall, Barrett, Kirby, Kunz, & Garcia Williams, 2020).

The pandemic has made an unprecedented number of people medically and socially vulnerable. As a result, clinicians have never had a more critical time to engage patients in advance care planning (ACP) conversations about their goals, values, and preferences during critical illness. In the early days of this pandemic, health systems and expert organizations sought to quickly mobilize resources to support ACP as a vital focus of quality and safety efforts (Paladino, Mitchell, Mohta, Lakin, Downey, Fromme & Sanders, 2020).

COVID-19 home confinement has been associated with decreased habitual physical activity and increased sedentary levels. Inactivity has

been linked to a higher mortality rate and poorer general health and fitness (Bentlage, Ammar, How, Ahmed, Trabelsi, Chtourou & Brach, 2020). Healthy lifestyle (HL) behaviors have consistently been linked to lower all-cause mortality and increased lifespan and well-being. Unhealthy behaviors (poor diet, lack of physical activity, tobacco, and alcohol use) contribute significantly to the global disease burden and have been linked to poorer outcomes across psychiatric disorders. Furthermore, it is becoming increasingly clear that unhealthy lifestyles may drive the epidemic of common mental disorders Lifestyle (Balanzá–Martínez, Atienza–Carbonell, Kapczinski & De Boni 2020). The long-term impact of the COVID-19 pandemic and associated restrictions on lifestylerelated behavior, such as diet, physical activity, and sleep, is undoubtedly significant (Kumari, Ranjan, Vikram, Kaur, Sahu, Dwivedi & Goel, 2020).

Different researchers conducted several studies on COVID-19 preventive practices. Usher, Jackson, Durkin, Gyamfi & Bhullar (2020) conducted a study entitled "Pandemic Related Behaviors and Psychological Outcomes; A Rapid Literature to Explain Covid-19 Behaviors. This study systematically examines, synthesizes, and critically appraises the available evidence on the relationship between pandemic related behaviors and psychological outcomes. Out of the 3844 articles identified, eleven (11) were included in the final synthesis, representing data from 32.049 individual respondents from eight countries. Psychological outcomes included anger, mental distress, anxiety, and post-traumatic stress disorder. Behaviors during the pandemic were also identified and categorized into protective, preparedness, or perverse behaviors. The review showed that despite limited evidence related to pandemic-related behaviors and psychological outcomes, findings point out the impact of pandemic-related behaviors on psychological effects. Promoting mental health support is strongly recommended for people showing signs of psychological distress.

Moreover, a study on the "Epidemiology, causes, clinical manifestation, and diagnosis, prevention, and control of coronavirus (COVID-19) during the early outbreak period" was conducted in 2020. Sixty-five research articles published before January 31, 2020, were analyzed and discussed to understand better the virus's epidemiology, causes, clinical diagnosis, prevention, and control. Findings have indicated that the virus originated in a seafood market in Wuhan, but no specific animal associations have been established. The reported symptoms are fever, cough, fatigue, pneumonia, headache, diarrhea, hemoptysis, and dyspnea. Preventive measures like masks, hand hygiene practices, avoiding public contact, case detection, contact tracing, and quarantines reduce transmission. No specific antiviral treatment has been effective; thus, infected individuals rely primarily on symptomatic treatment and supportive care (Adhikari, Meng, Wu, Mao, Ye, Wang & Zhou 2020).

In 2020, a study was conducted to integrate the Protection Motivation Theory and Extended Theory of Planned Behavior among the six hundred forty-nine Filipinos who participated in the study. The study's primary goal is to assess factors influencing Filipinos' perceived effectiveness of COVID-19 prevention measures during Enhanced Community Quarantine (ECQ) in Luzon, Philippines. Results revealed that a person's understanding of COVID-19 is directly associated with perceived vulnerability and severity. Moreover, the person's perception of his susceptibility to the disease and the severity of the condition indirectly affects his intention to follow the preventive measures. Education regarding COVID-19 affects the effectiveness of preventative measures (Prasetyo, Castillo, Salonga, Sia & Seneta, 2020).

The pandemic greatly impacted the community, affecting people's lives and health, as well as their livelihoods, economies, and behaviors. The most vital thing an individual can do for the community is to follow the rules and implement all measures to help slow or stop the virus's spread. This research study intends to assess the health practices used by San Antonio, Duero, Bohol to prevent the spread of COVID-19 infection. The study's findings will be used in formulating an information educational campaign material for the community.

#### **RESEARCH METHODOLOGY**

This study used the quantitative descriptive-correlational design aided by a questionnaire. The respondents are the one hundred (100) randomly selected residents of Barangay San Antonio Duero, Bohol, 18 years old and above. The study includes the permanent residents from the five Puroks of barangay San Antonio, Duero, Bohol. Transient residents are excluded. A modified questionnaire was used to assess the respondent's health practices and prevention of COVID-19. The questionnaire was pilot tested on ten respondents of similar characteristics. These respondents were not included during the final data gathering. The data gathered during pilot testing was subjected to Cronbach's alpha, obtaining a reliable and valid result, as shown below:

Variable	Reliability Result	Description		
Lifestyle	.765	High-Reliability Result. The accepted		
Preventive measures	.826	result is at least .70		

The study underwent an ethics review from the University of Bohol Ethics Review Committee. Once the ethics board approves the study, the researchers get permission from the VP for Academics, the Dean of the University of Bohol College of Nursing, the Barangay Captain, and the Rural Health Unit head to conduct the study. The researchers randomly selected the study's respondents and contacted each selected respondent through their email address or FB messenger account. Informed consent was obtained from each respondent, emphasizing their voluntary participation in the study. After this, the researchers sent the questionnaire online to the respondent who voluntarily joined the investigation. The researchers ensured the respondent's highest privacy and confidentiality throughout the research process. Data was retrieved digitally and stored in the researcher's google drive, to which only the researchers have access. It was coded, analyzed, and interpreted with the aid of SPSS.

#### **RESULTS AND DISCUSSION**

The Data showed that the majority (45.3%) of the respondents were between twenty to twenty-four (20-24) years old, eighty-six (57.3%) were females, (76.7%) were single, only (38.7%) of the respondents graduated from college, 66.0% had no income, and (89.3%) of the respondents had no comorbidities. A total of 11.7% were suffering from health problems such as Hypertension (6.7%), Diabetes (2.7%), and heart failure (1.3%).

Data present the Level of Health Practices of the Respondents in terms of Lifestyle. Results showed that respondents have good health practices in terms of Lifestyle. Parents reminded them to eat nutritious foods daily, considered a "Very good health practice." Although most respondents are in their early adulthood, they still need constant reminders from parents to eat a healthy diet, especially during this pandemic, where one needs to have a robust immune system to prevent getting the disease. A strong immune system is made possible by eating "at least one serving of fruits and vegetables every meal. Individuals in early adulthood are still considered adventurous and love to socialize with friends through drinking sessions. However, findings revealed that respondents negate this practice as they do not spend on a drinking spree with friends and even avoid drinking alcoholic beverages, which is considered a good health practice, especially in trying to prevent the spread of Covid-19. Respondents tried to adhere to healthy dietary intake, including vitamins and minerals, to boost their immune systems.

Furthermore, data revealed that respondents were trying to spend time to become productive. They spend time doing household chores, engaging in physical exercise every day, and even balancing their activity with rest as they try to nap in the afternoon and even go to bed early. The limitations of community social gatherings caused the respondents to spend their time sitting in front of their laptop or cellphone". Respondents "have increased stress levels as they hear increasing COVID-19 cases from the news report," which is considered fair health practices.

Healthy lifestyle (HL) behaviors have consistently been linked to lower mortality and increased lifespan and well-being. Unhealthy behaviors (poor diet, lack of physical activity, tobacco and alcohol use) contribute significantly to the global disease burden and have been linked to poorer outcomes. It is increasingly clear that unhealthy lifestyles drive common mental disorders during the pandemic (Balanzá et al. 2010). The long-term impact of the COVID-19 pandemic and associated restrictions on lifestyle-related behavior, such as diet, physical activity, and sleep, is undoubtedly significant (Kumari et al., 2020).

Results showed that the respondents had "very good Health practices" in adhering to preventive measures. Data revealed that respondents "*Ensure that food is well-cooked*" and Used disinfectants to clean their hands when soap and water were unavailable. Respondents "*Clean surfaces at home using a disinfectant such as zonrox.*" *Respondents* followed what has been instructed by the Department of Health (DOH) to minimize the spread of COVID-19. The DOH repeatedly emphasizes practicing frequent and proper handwashing, observing good cough etiquette, and maintaining appropriate distance of at least one meter apart.

Category	Weighted Mean	Descriptor	Interpretation	Rank
Preventive Measures	3.451	Always	Very Good health Practices	1
Lifestyle	2.832	Most of the time	Good health Practices	2
Overall Mean	3.141	Most of the time	Good health Practices	

Table 1. Summary of Level of Health Practices (N=100)

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Scaling	Descriptor	Interpretation	
1.00 - 1.74	Never	Poor Health Practices	
1.75 – 2.49	Sometimes	Fair health practices	
2.50 - 3.24	Most of the time	Good health Practices	
3.25 - 4.00	Always Very Good health Practice		

The Level of Health Practices includes the preventive measures and Lifestyle of the respondents. Results revealed that respondents have "Very good health practices" in terms of preventative measures (WM=3.451) and good health practices in terms of Lifestyle (WM=2.832). DOH calls the public to BIDA solusyon to fight Covid-19, a social and behavioral change campaign in the Philippines. It encourages Filipino people to practice the four vital preventive behaviors to protect themselves and their families from COVID-19. Each letter in BIDA represents the following: *Bawal walang mask, I-sanitize and kamay at Iwas-hawak sa mga bagay, Dumistansya ng isang metro, at Alamin ang totoong impormasyon.* The campaign is a partnership between government, private, and development partners, with the USAID providing financial and technical assistance for the first phase of its rollout. Staying safe against COVID-19 isn't just about doing what's needed when it's easy or convenient; it's about always making a conscious effort to protect your friends and loved ones (DOH, 2020).

Variables	Statistical Treatment	Value	P-value	Decision	Interpretation
Age and level of Health Practices	Spearman's rank Test	0.364	0.000	Reject null hypothesis	There is a significant relationship between the Age of the respondents and the level of health practices
Sex and level of Health Practices	Chi-Square Test	1.718	0.697	Failed to reject the null hypothesis	There is no significant relationship between respondent's civil status and the level of Health Practices
Civil status and level of Health Practices	Chi-Square Test	6.523	0.481	Failed to reject the null hypothesis	There is no significant relationship between respondent's civil status and the level of Health Practices
Highest Educational attainment and level of Health Practices	Chi-Square Test	6.874	0.811	Failed to reject the null hypothesis	There is no significant relationship between respondent's civil status and the level of Health Practices
Monthly income and level of Health Practices	Chi-Square Test	14.204	0.610	Failed to reject the null hypothesis	There is no significant relationship between respondent's civil status and the level of Health Practices
Comorbidities and level of Health Practices	Chi-Square Test	7.477	0.362	Failed to reject the null hypothesis	There is no significant relationship between respondent's civil status and the level of Health Practices
Purok and level of Health Practices		25.931	0.005	Reject null hypothesis	There is a significant relationship between the Age and level of health practices

# Table 2. Analysis of the significant relationship between the Respondent's Profile and level of health practices (N=100)

Table 2 shows the relationship between the Demographic profile and the level of Health Practices. Data revealed that when age and health practices were subjected to Spearman's rank test, it revealed a p-value lower than 0.05 level of significance, showing a significant relationship between the two variables. This further means that the respondents' Age is associated with the respondent's level of health practices. Young people comply with COVID-19 preventive measures (Nivette, Ribeaud, Murray, Steinhoff, Bechtiger, Hepp, & Eisner, 2021). The Elderly also practice behaviors to prevent COVID-19 infection, especially since they are highly vulnerable (Zareipour, Ardakani, Moradali, Jadgal, & Movahed (2020).

Furthermore, when the data between the Purok and level of Health Practices were subjected to a Chi-Square Test, it obtained a P-value of 0.005, which is lower than the 0.05 level of significance, showing a significant relationship between the variables, thereby rejecting the hypothesis. This further means that the Purok of the respondents is associated with the respondent's level of health practices. A research entitled Knowledge Attitudes and practices regarding COVID-19 Among Rural and Urban Residences in China revealed that individuals living in the city have better preventive measures than those living in rural areas (Yue, Zhang, Cao, & Chen, 2021). People living in the city receive more health information related to healthy practices. Conversely, in this study, Respondents living in puroks near Rural Health Units and the municipality may obtain more information about COVID-19 prevention.

The respondent's Sex, civil status, educational attainment, monthly income, comorbidities, purok, and level of Health Practices revealed an insignificant result. This further means that Sex, civil status, educational attainment, monthly income, and comorbidities are not associated with the level of health practices employed. The results of this study opposed the findings of the survey conducted by Sánchez-Arenas, Doubova, González-Pérez, & Pérez-Cuevas, (2021) revealed that high education has a significant engagement in COVID-19 preventive measures.

#### CONCLUSIONS

Respondents observe good health practices regarding diet and exercise but need more effort to reduce spending time in front of cellphones and laptops. The increasing number of COVID-19 cases affects the respondent's stress levels. The respondents always practice preventive measures against COVID-19. However, there is still a need to emphasize the importance of avoiding mass gatherings and cleaning surfaces at home with disinfectants.

#### RECOMMENDATION

- The LGU, in coordination with the DOH and RHU, will enhance the health education campaign by distributing Instructional Educational Campaign leaflets on the effects of a sedentary lifestyle on one's health.
- That the LGU, in coordination with the DOH and RHU, will provide webinars to help reduce stress and promote diversional activities for stress reduction while still observing the minimum health standards and safety.
- 3. That the LGU, in coordination with the DOH and RHU, will enhance and strengthen its campaign against mass gatherings and reemphasize the use of disinfectants to clean surfaces at home. LGUs should also maintain proper sanitation in all public places (wet markets, streets, barangay, and municipal halls). Private establishments must also know the appropriate disinfection protocol and other measures to maintain cleanliness and sanitation.

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