

RESEARCH ARTICLE: HEALTH AND WELL-BEING PRACTICES AMONG SELECTED RESIDENTS IN LUUK, SULU

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ABSTRACT. The health and well-being habits of a sample of Luuk, Sulu people were examined in this study. With 120 residents of Luuk, Sulu chosen through a purposive sampling process, it used a descriptive quantitative research design. Frequency, percentage score, weighted mean, standard deviation, t-test for independent sample, one-way ANOVA, and Pearson's test of correlation were used to analyze the data. The findings are as follows: 1) Most respondents were female, aged 21–40 years and older, married, had formal education, were mostly unemployed, and had three to six family members living in their home; 2) Most respondents generally reported moderate health and well-being practices in their respective households; 3) When data were grouped by occupation, educational attainment, and gender, substantial disparities were discovered in the health and well-being practices as perceived by a subset of inhabitants. When data were categorized by age, civil status, and the number of family members living in the home, no discernible variations were found. These noteworthy results also demonstrate the perceived advantages of WASH practices in fostering improved health and wellbeing. This is in line with the societal-Ecological Model, which emphasizes the importance of individual, societal, and environmental factors influencing behavior, and the health belief model, which emphasizes how people's beliefs about health risks and benefits drive behavioral changes. 4) This study emphasizes a highly positive significant association between sanitation and water access, a moderately positive significant correlation between water access and hygiene, and a lowly positive significant correlation between sanitation and hygiene due to the significant correlation. Lastly, this study highlights the need of incorporating common behaviors to close health awareness gaps and remove obstacles to community well-being. To encourage better health and well-being practices in the community, culturally sensitive community-based interventions, health programs, and collaborations with the LGU and the community may be given careful thought.

KEYWORDS: *Health, Practices, Implementation, Water Access, Sanitation, Hygiene*

ARTICLE DETAILS

SPHE-00052; Received: April 04, 2025; Accepted: April 17, 2025; Published Online: May 17, 2025

CITATION:

Ladjahasan, Nurul-Rahma D. (2025). Health and Well-Being Practices Among Selected Residents in Luuk, Sulu. *Social Psychology and Human Experience*. *Social Psychology and Human Experience*, 2(1). DOI: 10.62596/tmdtcy89

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1. Introduction

Poor quality of life, increased illness prevalence, and detrimental effects on general well-being are frequently associated with inadequate WASH services. Services related to water, sanitation, and hygiene (WASH) are critical to development, welfare, and public health. According

to UN Water (2015), water is regarded as a basic human health necessity, and maintaining the quality of water and halting the spread of diseases linked to it require proper sanitation and hygiene services. The neglected tropical diseases (NTDs) (WHO 2012), including schistosomiasis and soil-transmitted helminthiasis (STH), are among the illnesses that can be avoided with WASH. Environmental pathways facilitate the spread of these illnesses, as individuals may become infected with repeated exposure (Garchitorena et al. 2017).

According to the World Bank 2020, 91% of Filipinos have access to improved water sources, but there are notable differences between urban areas (97%) and rural areas (85%). Additionally, a 2019 study by the Department of Health and UNICEF revealed that 1 in 5 rural households rely on unsafe water sources, which can lead to water-borne diseases. Additionally, research conducted by the World Health Organization and UNICEF 2019 showed that open defecation practices are still prevalent in many areas, contaminating water sources and posing health risks. Finally, the Philippine Statistics Authority (PSA) reported that 26.6% of households in 2020 lacked access to improved sanitation facilities. Last but not least, a study in the Journal of Environmental Science and Health (2020) revealed that hand washing with soap is not common, especially in rural areas (44.1%). The Department of Health and UNICEF (2019) also found that only 12% of rural households have access to soap and water for handwashing.

The World Bank 2020 reports that 91% of Filipinos have access to improved water sources, but there are notable differences between urban areas (97%) and rural areas (85%). Additionally, a 2019 study by the Department of Health and UNICEF revealed that 1 in 5 rural households rely on unsafe water sources, which can lead to water-borne diseases. Additionally, research conducted by the World Health Organization and UNICEF 2019 found that open defecation practices are still prevalent in many areas, contaminating water sources and posing health risks. Finally, the Philippine Statistics Authority (PSA) reported that 26.6% of households in 2020 lack access to improved sanitation facilities. The use of open communication with others was one of their adaptive strategies (Chavez, 2023). Finally, a study in the Journal of Environmental Science and Health (2020) revealed that hand washing with soap is not common, especially in rural areas (44.1%), and that only 12% of rural households have access to handwashing facilities with soap and water (DOH and UNICEF, 2019).

Tubig Putih, Tandu Bato, Bual, Lianutan, Mananti, Guimbaun, Kanbulak, Kanmindus, Niog-niog, Lingah, Lambago, and Tulayan Island are the twelve barangays that make up Luuk, Sulu, a municipality in the southern Philippines' Bangsamoro Autonomous Region in Muslim Mindanao. There are 37,873 people living in Luuk Sulu as of 2024. Their honorable mayor, Mrs. Maryam N. Arbison, is currently in charge of Luuk. Due to a lack of access to infrastructure for safe water, sanitation, and hygiene, Luuk, Sulu had severe health issues. The population is at serious risk for health problems due to the prevalence of water-borne illnesses like cholera and diarrhea. Furthermore, inadequate sanitation and hygiene practices made health vulnerabilities worse, especially for vulnerable populations like the elderly, pregnant women, and children.

To reduce these health hazards and enhance general wellbeing in Luuk, Sulu, an efficient WASH program may be essential. However, a number of variables, such as socioeconomic circumstances, cultural acceptance, and community knowledge, affect how effective WASH programs are. vital to improving job satisfaction and fostering an atmosphere that encourages successful teaching (Bucoy et al., 2024). Developing evidence-based treatments required an understanding of the intricate relationships that exist between WASH behaviors, health outcomes, and well-being. With an emphasis on the effects of wash programs, this study sought to examine the health and well-being habits of a sample of Luuk, Sulu inhabitants. by looking at a

selection of inhabitants' present WASH practices, attitudes, and behaviors.

2. Research Questions

This research aimed to investigate the health and well-being practices among selected residents in Luuk, Sulu with the specific focus on the impact of wash programs. By examining the current WASH practices, behaviors and perceptions among selected residents. Specifically, this sought to answer the following research questions:

1. What is the Socio-demographic profile of selected residents in Luuk, Sulu in terms of:
 - 1.1 Gender;
 - 1.2 Age;
 - 1.3 Civil status;
 - 1.4 Educational attainment;
 - 1.5 Occupation; and
 - 1.6 Number of family members in the household?
2. What is the extent of water access, sanitation and hygiene of selected residents in Luuk Sulu in terms of:
 - 2.1 Water access;
 - 2.2 Sanitation; and
 - 2.3 Hygiene?
3. Is there a significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to this demographic profile:
 - 3.1 Gender;
 - 3.2 Age;
 - 3.3 Civil status;
 - 3.4 Educational attainment;
 - 3.5 Occupation; and
 - 3.6 Number of family members in the household?
4. Is there a significant correlation among the subcategories subsumed under the health and well-being practices among selected residents in Luuk, Sulu?

3. Literature

Numerous studies conducted worldwide have highlighted the importance of WASH (Water, Sanitation, and Hygiene) initiatives in lowering the prevalence of diarrheal illnesses and enhancing patient outcomes. The usefulness of WASH initiatives in avoiding diarrheal infections is highlighted by the World Health Organization (2019). Handwashing also helps prevent infectious infections, according to the Centers for Disease Control and Prevention (2020).

By addressing the basic needs for clean water and efficient sanitation, Water, Sanitation, and Hygiene (WASH) programs in the US have markedly improved health and welfare. Under the Safe Drinking Water Act, which guarantees public water systems adhere to safety regulations, access to safe drinking water is a top concern. Despite these advancements, aged infrastructure and underfunded systems continue to complicate access to clean water for some rural areas and marginalized people, including Native American reservations (Centers for Disease Control and Prevention [CDC], 2022). Public health initiatives must continue to prioritize addressing these discrepancies. In the United States, the infrastructure for sanitation has been essential in lowering the spread of disease. Modern wastewater treatment plants aid in stopping the spread of hepatitis and cholera, two watery diseases. In order to manage rising demand and lessen the effects of climate change, the Environmental Protection Agency (EPA) stresses the significance of updating sanitation infrastructure, especially in places that are already at risk (EPA, 2021). With initiatives

like "Clean Hands Save Lives," which aim to lower the frequency of infectious diseases through appropriate handwashing practices, hygiene education is a key part of WASH programs in the United States. Regular handwashing with soap can reduce diarrhea incidence by up to 40%, according to studies, highlighting the significance of this practice in public health measures (National Institutes of Health [NIH], 2020). During the COVID-19 pandemic, when good hygiene became a key line of defense against the spread of the disease, such programs had a particularly significant influence (CDC, 2021). By creating a supportive social atmosphere, offering sufficient support networks, and offering faculty development initiatives (Carpio LB, Caburnay ALS, Nolledo SM, et al. 2024). Inequalities in WASH services still exist despite these developments, especially for low-income households and underprivileged rural communities. A multi-sectoral strategy that incorporates infrastructure expenditures, community involvement, and governmental policy is needed to address these discrepancies. To guarantee that all Americans have fair access to clean water, sanitation, and hygiene, research emphasizes the necessity of long-term solutions (National Academies of Sciences, Engineering, and Medicine, 2022).

Water, Sanitation, and Hygiene (WASH) initiatives have been essential to enhancing public health in Manila, the Philippine capital, especially in tackling the issues brought on by the city's dense population and growing urbanization. However, little is known about how they are being implemented (Leon et al., 2024). Although Manila has made significant strides in ensuring that people have access to clean water and sanitation services, problems with waste management, water access, and hygiene still impact a sizable portion of the populace.

According to the World Bank (2020), Metro Manila's vast water distribution system provides drinkable water to almost 96% of its residents. There are notable differences between urban and informal communities, meanwhile, with many inhabitants still without consistent access to sanitary services and water (Asian Development Bank, 2021). Manila has serious sanitation problems, especially in the crowded informal areas where wastewater treatment facilities are either nonexistent or inadequate.

Through programs like the "Sanitation for All" campaign, which aims to provide access to adequate sanitation facilities in rural regions, the Thai government has attempted to improve sanitation coverage, according to the World Health Organization (2021). Leaders were commended for their dedication to obtaining input, communicating effectively, and cooperating with the community to address problems (Chavez JV, Garil BA, Padirque CB, et al. 2024). In order to lessen environmental contamination and enhance public health, this initiative places a strong emphasis on building latrines and upgrading waste management systems. Even though there has been a lot of progress, obstacles including poor infrastructure and the requirement for behavior change in rural communities still stand in the way of advancement (Ministry of Public Health Thailand, 2021).

Another essential element of Thailand's WASH initiatives is hygiene education. To lessen the spread of infectious diseases, the Thai Ministry of Public Health (2020) has launched public health initiatives encouraging handwashing and other cleanliness habits. To reinforce learning and enhance practical application, these campaigns—especially those aimed at schools and community centers—emphasize the value of hand cleanliness in preventing illnesses (Magno, J.M., Indal, R.S., Chavez, J.V., et al., 2024).

Water, Sanitation, and Hygiene (WASH) initiatives are essential to South Korea's public health system and are crucial to preserving the nation's high standards of health and wellness. With almost all of its citizens having access to clean drinking water and contemporary sanitary facilities, South Korea has one of the best developed water and sanitation systems in Asia (World Bank,

2020). In order to maintain water quality and lower the dangers of waterborne illnesses, the Korean Ministry of Environment (2021) states that the nation has effectively adopted a variety of water treatment technologies, such as sophisticated filtration systems and wastewater treatment plants. The nation's low prevalence of waterborne diseases like cholera and dysentery, which have all but eradicated in urban areas, is evidence of the effectiveness of these efforts. With vast sewer networks spanning both urban and rural areas, South Korea's sanitation systems are likewise well advanced. The majority of wastewater in South Korea is processed to high standards by the country's sophisticated sewage treatment facilities, avoiding environmental contamination and threats to public health, according to the Korea Water Resources Corporation (K-water, 2020).

Proper hand hygiene is emphasized in public health initiatives, such those run by the Korean Centers for Disease Control and Prevention (KCDC, 2021), as a key strategy for halting the spread of infectious diseases, especially during the COVID-19 pandemic and seasonal flu outbreaks. restricted only to familiar contexts and frequently struggled with comprehension (Garil, B.A., Abbas, T., S.C., Limen, M.V., 2024). According to research, encouraging handwashing can greatly lower the spread of respiratory and gastrointestinal illnesses, particularly in public places like schools (KCDC, 2021). Schools incorporate hygiene education into their curricula, teaching kids about good handwashing habits and other hygiene habits at a young age. Maintaining public health and lowering the spread of disease throughout the population have been made possible in large part by these initiatives. Notwithstanding these achievements, environmental issues and the management of water resources continue to be problems for South Korea. In some areas, flooding and water scarcity have grown due to climate change, endangering sanitation and water quality.

Programs encouraging the construction of private and public restrooms have been started by the BARMM Ministry of Health, especially in rural and underprivileged areas (BARMM Ministry of Health, 2021). To assist lower the prevalence of waterborne illnesses like cholera and diarrhea, these programs frequently provide instruction to communities on how to build and maintain inexpensive sanitary facilities. Given the province's susceptibility to disease outbreaks, hygiene promotion is an essential feature of WASH programs in Sulu. Handwashing, proper food handling, and trash disposal are the main topics of hygiene education campaigns that are carried out by local health offices in partnership with non-governmental organizations. Since hygiene teaching is incorporated into everyday operations at schools and community centers, these initiatives have a particularly significant influence there. With the provision of hygiene kits and the placement of handwashing stations in public areas, hygiene awareness programs were stepped up during the COVID-19 pandemic (BARMM Ministry of Health, 2021). These initiatives have improved community health generally and slowed the spread of infectious diseases. WASH program implementation in Sulu is still fraught with difficulties, nevertheless, such as logistical problems getting to isolated islands and security risks brought on by the ongoing conflict. Additionally, water scarcity and pollution hazards are made worse by climate change, especially in coastal regions that are vulnerable to flooding and saltwater intrusion. In order to effectively address these concerns, the Philippine Climate Change Commission (2021) emphasizes the necessity of climate-resilient WASH infrastructure, such as raised water tanks and flood-proof sanitary facilities. To overcome these obstacles and guarantee sustainable WASH service delivery throughout the province, local governments, non-governmental organizations, and foreign agencies must continue their relationships. In conclusion, even though Sulu's WASH services have improved significantly, enduring issues including poor infrastructure, conflict, and environmental vulnerabilities highlight the need for ongoing funding and creative solutions. Improving health outcomes and general well-being in the province requires addressing these issues.

4. Methodology

The current chapter outlines the methodology employed in the research. It covers the research design, study participants, sampling method, and research tools. Additionally, it discusses the statistical techniques that will be utilized in data analysis.

Research Design

Numerical data on the health and well-being habits of a subset of Luuk, Sulu people was gathered through quantitative research, taking into account the respondents' sociodemographic profile as well as water access, sanitation, and hygiene.

Respondents of the Study

Barangay Tubig Putih, Tanduh Bato, Bual, Lianutan, Mananti, Guimbaun, Kanbulak, Kanmindus, niog-niog, Lingah, Lambago, and Tulayan Island were among the twelve barangays in Luuk, Sulu. Each barangay had a maximum of ten participants, which equates to 120 participants. Due to the large population of the Municipality of Luuk, the researcher has chosen to only include the specified number of respondents.

Research Instrument

The primary data-gathering tool for this study was a survey questionnaire called "Core questions and indicators for monitoring WASH in schools in the sustainable development goals," which was modeled from a study conducted by the World Health Organization and UNICEF. There were two components to the research tool. The respondents' demographic profile was covered in Part I. Part II examined the chosen residents of Luuk, Sulu's access to water, sanitation, and hygiene. Because it was easy for respondents to complete, the Likert survey was chosen as the questionnaire type. Additionally, by using statistics for data interpretation, this study tool made it possible to successfully implement the quantitative method.

Data Gathering Procedure

In order to examine WASH habits and health outcomes in Luuk, Sulu, this study used a multi-stage data collection technique. The study instrument was examined and refined in advance, and the required permissions and ethics approval were acquired. Stratified random sampling was used to identify target families, data collecting materials, sampling and participant selection were acquired, data collectors were hired and trained, and informed consent was acquired from a subset of the households. To guarantee validity and reliability, the questionnaire underwent pre-testing. Data collection: Selected families were given the questionnaire, and responses were recorded along with optional observations of WASH facilities. Data Cleaning and Validation: Surveys were examined for quality and completeness, and data was cleaned and verified. Analyzing the Data Descriptive and inferential statistics were performed using statistical software. Reporting and Distribution The research reports were prepared and completed, and the results were given to interested parties, such as representatives of the health department and local government.

Data Analysis

The following statistical tools were used to generate the primary empirical data for this study: Descriptive statistics, specifically frequency and percentage distribution, were used for the first problem statement. These statistics are essential for examining a population's sociodemographic profile. Researchers can efficiently summarize data by classifying characteristics including age, civil status, educational attainment, occupation, and the number of family members living in the household (Triola, 2018). In order to examine the health habits and general well-being of the chosen population of Luuk Sulu, the second issue statement utilized the mean and standard deviation. We hope to determine the level of water availability, sanitation, and hygiene among the chosen population of Luuk Sulu by utilizing these statistical measures. Our

inferential statistics approach, which enables us to draw conclusions or predictions about a population from sample data, employed ANOVA (Analysis of Variance) for the third problem statement. Researchers can determine relationships, make predictions, or test the efficacy of interventions within a population by using inferential statistics, which include methods like regression analysis, hypothesis testing, and confidence intervals to draw conclusions beyond the immediate dataset (Gravetter & Wallnau, 2016). ANOVA specifically looks for significant differences between three or more groups by comparing their means. This technique determines if the observed variations in sample means are the result of random variability or actual variations in population means. ANOVA assists in determining the factors influencing the dependent variable by comparing the variance between group means to the variance within groups (Field, 2018). Additionally, correlation coefficients—more especially, Pearson's correlation—were employed to assess the direction and strength of correlations between variables in the fourth problem statement. A perfect positive correlation is denoted by a correlation coefficient of +1, a perfect negative correlation by a correlation value of -1, and no correlation by a correlation coefficient of 0. When assessing linear correlations between continuous data, Pearson's correlation is commonly employed (Cohen, West, & Aiken, 2014).

5. Results

Question 1. What is the socio-demographic profile of selected residents in Luuk, Sulu in terms of: Gender, Age, Civil Status, Educational Attainment, Occupation, and Number of Family Members in the Household?

1.1 On Gender

Table 1.1 shows the socio-demographic profile of selected residents in Luuk, Sulu in terms of gender. It can be gleaned from this table that out of 120 selected residents, 44% are male and 76% are female. This means that female respondents are higher in number than their counterparts.

Table 1.1 Socio-demographic profiles of the selected residents in terms of gender

Gender	Number of Respondents	Percent	Cumulative percent
Male	44	36.7%	36.7%
Female	76	63.3%	100%
Total	120	100%	

1.2 On Age

Table 1.2 shows the socio-demographic profile of selected residents in Luuk, Sulu in terms of age. It can be gleaned from this table that out of 120 selected residents, 13.3% aged 20 years old and below, 32.5% aged 21-30 years old, 28.3% aged 31-40 years old, and 25.8% aged 41 years old and above. This means that average age of the respondents aged from 21 years old and above

Table 1.2 Socio-demographic profiles of the selected residents in terms of age

Age	Number of Respondents	Percent	Cumulative percent
20 years old and below	16	13.3%	13.3%
21 to 30 years old	39	32.5%	45.8%
31 to 40 years old	34	28.3%	74.2%
41 years old and above	31	25.8%	100%
Total	120	100%	

1.3 On Civil Status

Table 1.3 shows the socio-demographic profile of selected residents in Luuk, Sulu in terms of civil status. It can be gleaned from this table that out of 120 selected residents, 24.2% are single, 69.2% are married, 3.3% are separated, and 3.3% are widowed. This means that the majority of the respondents are married.

Table 1.3 Socio-demographic profiles of the selected residents in terms of civil status

Civil Status	Number of Respondents	Percent	Cumulative percent
Single	29	24.2%	24.2%
Married	83	69.2%	93.3%
Separated	4	3.3%	96.7%
Widowed	4	3.3%	100%
Total	120	100%	

1.4 On Educational Attainment

Table 1.4 shows the socio-demographic profile of selected residents in Luuk, Sulu in terms of educational attainment. It can be gleaned from this table that out of 120 selected residents, 16.7% have no formal education, 22.5% have primary education, 31.7% have secondary education, and 29.2% have earned a college degree. This means that the majority of the respondents have formal education.

Table 1.4 Socio-demographic profiles of the selected residents in terms of educational attainment

Educational Attainment	Number of Respondents	Percent	Cumulative percent
No Formal Education	20	16.7%	16.7%
Primary Education	27	22.5%	39.2%
Secondary Education	38	31.7%	70.8%
College Degree	35	29.2%	100%
Total	120	100%	

1.5 On Occupation

Table 1.5 shows the socio-demographic profile of selected residents in Luuk, Sulu in terms of occupation. It can be gleaned from this table that out of 120 selected residents, 58.3% are unemployed, 15% are self-employed, and 26.7% are government employees. This means that the majority of the respondents are presently unemployed.

Table 1.5 Socio-demographic profiles of the selected residents in terms of occupation

Occupation	Number of Respondents	Percent	Cumulative percent
Unemployed	70	58.3%	58.3%
Self-employed	18	15%	73.3%
Government Employee	32	26.7%	100%
Total	120	100%	

1.6 On Number of family members in the household

Table 1.6 shows the socio-demographic profile of selected residents in Luuk, Sulu in terms of number of family members in the household. It can be gleaned from this table that out of 120 selected residents, 4.2% composed of 2 family members, 17.5% composed of 3 family members, 22.5% composed of 4 family members, 16.7% composed of 5 family members, 18.3% composed of 6 family members, 9.2% composed of 7 family members, 5% composed of 8 family members, 2.5% composed of 9 family members, 1.7% composed of 10 family members, 0.8% composed of 12 family members, and 1.7% composed of 13 family members. This means that the majority of the respondents have 3 to 6 family members in their household.

Table 1.6 Socio-demographic profiles of the selected residents in terms of number of family members in the household

Number of family members in the household	Number of Respondents	Percent	Cumulative percent
2	5	4.2%	4.2%
3	21	17.5%	21.7%
4	27	22.5%	44.2%
5	20	16.7%	60.8%
6	22	18.3%	79.2%

7	11	9.2%	88.3%
8	6	5%	93.3%
9	3	2.5%	95.8%
10	2	1.7%	97.5%
12	1	0.8%	98.3%
13	2	1.7%	100%
Total	120	100%	

Question 2. What is the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of: Water Access; Sanitation; and Hygiene?

2.1 In terms of Water Access

Table 2.1 reflects the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of water access. It can be gleaned from this table that, generally, the respondents obtained a composite mean score of 3.10 with a standard deviation of .615, which is rated as “moderate” in the water access category. More specifically, statement number one under water collection garnered a high mean of 3.98 with a standard deviation of 1.263, which is rated as “High,” and states, “I collect water supply from deep wells.” Statement number one under water preparation also garnered the higher mean of 4.44 with a standard deviation of 1.129, which is rated as “High”, and states, “I treat our water by boiling”. Finally, statement number one under water storage garnered the highest mean of 4.57 with a standard deviation of .994, which is rated as “Very High”, and states, “My water storage is in multiple medium gallons with cover”.

Table 2.1 Extent of health and well-being practices of selected residents in Luuk, Sulu in terms of water access

No	Water Access	Mean	S.D.	Description
Water Collection				
1	I collect water from a deep well.	3.98	1.263	High
2	I collect water from rain water.	3.32	1.146	Moderate
3	I collect water from water trucking.	1.92	1.199	Low
4	I collect water from the public water system.	2.71	1.770	Moderate
Water Preparation				
1	I treat our water by boiling.	4.44	1.129	High
2	I treat our water by filtering.	2.73	1.364	Moderate
3	I treat our water by chlorination	2.38	1.303	Low
Water Storage				
1	My water storage is in multiple medium gallons with cover.	4.57	.994	Very High
2	My water storage is in a plastic tank.	3.04	1.595	Moderate
3	My water storage is in an aluminum tank.	1.90	1.362	Low
Weighted Mean		3.10	.615	Moderate

Legend: (5) 4.50 – 5.00=Very high; (4) 3.50 – 4.49=High; (3) 2.50 – 3.49=Moderate; (2) 1.50 – 2.49=Low; (1) 1.00 – 1.49=Very low

2.2 In terms of Sanitation

Table 2.2 reflects the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of sanitation. It can be gleaned from this table that, generally, the respondents obtained a composite mean score of 2.59 with a standard deviation of .738, which is rated as “Moderate” in the sanitation category.

More specifically, statement number three under the type of toilet facility garnered the highest mean of 4.22 with a standard deviation of 1.231, which is rated as “High” and states, “I use a family shared toilet.” Meanwhile, statement number two under cleaning frequency garnered the higher mean of 3.77 with a standard deviation of 1.503, which is rated as “High”, and states, “I clean the toilet every day”.

Table 2.2 Extent of health and well-being practices of selected residents in Luuk, Sulu in terms of sanitation

No	Sanitation	Mean	S.D.	Description
Type of Toilet Facility				
1	I use an open defecation	1.83	1.339	Low
2	I use a public toilet.	2.42	1.400	Low
3	I use a family shared toilet.	4.22	1.231	High
4	I use an overhung latrine.	2.18	1.586	Low
5	I use an open pit latrine	1.53	1.069	Low
6	I use a bucket latrine	1.48	.961	Very Low
Cleaning Frequency				
1	I clean the toilet after every use	3.77	1.503	High
2	I clean the toilet every day	3.51	1.478	High
3	I clean the toilet weekly	2.90	1.514	Moderate
4	I clean the toilet once in two weeks	2.12	1.468	Low
Weighted Mean		2.59	.738	Moderate

Legend: (5) 4.50 – 5.00=Very high; (4) 3.50 – 4.49=High; (3) 2.50 – 3.49=Moderate; (2)1.50 – 2.49=Low; (1)1.00 – 1.49=Very low

2.3 In terms of Hygiene

Table 2.3 reflects the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of hygiene. It can be gleaned from this table that, generally, the respondents obtained a composite mean score of 4.39 with a standard deviation of .567, which is rated as “High” in the hygiene category.

More specifically, statement number two garnered the highest mean of 4.75 with a standard deviation of .598, which is rated as “Very High” and states, “I brush my teeth two times a day.”

Table 2.3 Extent of health and well-being practices of selected residents in Luuk, Sulu in terms of hygiene

No	Hygiene	Mean	S.D.	Description
1	I take a bath two to three times a day	4.35	.932	High
2	I brush my teeth two times a day	4.75	.598	Very High
3	I cut my nails regularly	4.62	.611	Very High
4	I wash my hands with soap before eating any meals.	4.42	1.001	High
5	I wash my hands with soap after eating any meals.	4.47	.943	High
6	I wash my hands with soap after using the toilet and after changing a diaper.	4.71	.691	Very High
7	I wash my hands with soap before and after preparing any food.	4.48	.860	High
8	I will cover my mouth and nose when coughing or sneezing	4.09	1.029	High
9	I wash my hands with soap after coughing and sneezing	3.93	1.189	High
10	I used hand sanitizer for sanitizing my hands	4.10	1.080	High
Weighted Mean		4.39	.567	High

Legend: (5) 4.50 – 5.00=Very high; (4) 3.50 – 4.49=High; (3) 2.50 – 3.49=Moderate; (2)1.50 – 2.49=Low; (1)1.00 – 1.49=Very low

Question 3. Is there a significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to this demographic profile: Gender; Age; Civil Status; Educational Attainment; Occupation; and Number of Family Members in the Household?

3.1 Health and Well-being Practices in terms of Gender

Table 3.1 shows the difference in the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of gender. It can be gleaned from this table that, generally, the overall mean differences and t-values obtained no significant difference in water access and

sanitation, however, indicated a significant difference in hygiene subcategory. Therefore, the hypothesis, which states that “there is no significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to gender” is rejected.

Table 3.1 Differences in the health and well-being practices as perceived by selected residents in terms of gender

VARIABLES	Grouping Gender	Mean	S. D.	Mean Difference	T	Sig.	Description
Water Access	Male	3.06	.523	-.056	-.480	.632	Not Significant
	Female	3.12	.664				
Sanitation	Male	2.72	.648	.199	1.432	.155	Not Significant
	Female	2.52	.780				
Hygiene	Male	4.08	.647	-.496	-5.081	.000	Significant
	Female	4.57	.414				

Significance at alpha 0.05

3.2 Health and Well-being Practices in terms of age

Table 3.2 shows the difference in the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of age. It can be gleaned from this table that, generally, the overall mean differences and t-values obtained under this category indicate no significant difference. Therefore, the hypothesis, which states that “there is no significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to age” is accepted.

Table 3.2 Differences in the health and well-being practices as perceived by selected residents in terms of age

SOURCES OF VARIATION		Sum of Squares	df	Mean Square	F	Sig.	Description
Water Access	Between Groups	1.434	3	.478	1.275	.286	Not Significant
	Within Groups	43.515	116	.375			
	Total	44.950	119				
Sanitation	Between Groups	1.122	3	.374	.681	.566	Not Significant
	Within Groups	63.744	116	.550			
	Total	64.866	119				
Hygiene	Between Groups	1.654	3	.551	1.748	.161	Not Significant
	Within Groups	36.597	116	.315			
	Total	38.252	119				

Significance at alpha 0.05

3.3 Health and Well-being Practices in terms of civil status

Table 3.3 shows the difference in the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of civil status. It can be gleaned from this table that, generally, the overall mean differences and t-values obtained under this category indicate no significant difference. Therefore, the hypothesis, which states that “there is no significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to civil status” is accepted.

Table 3.3 Differences in the health and well-being practices as perceived by selected residents in terms of civil status

SOURCES OF VARIATION		Sum of Squares	df	Mean Square	F	Sig.	Description
Water Access	Between Groups	.876	3	.292	.769	.514	Not Significant
	Within Groups	44.074	116	.380			
	Total	44.950	119				
Sanitation	Between Groups	.651	3	.220	.398	.755	Not Significant
	Within Groups	64.205	116	.553			
	Total	64.866	119				
Hygiene	Between Groups	.367	3	.122	.375	.771	Not Significant
	Within Groups	37.884	116	.327			
	Total	38.252	119				

Significance at alpha 0.05

3.4 Health and Well-being Practices in terms of educational attainment

Table 3.4 shows the difference in the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of educational attainment. It can be gleaned from this table that, generally, the overall mean differences and t-values obtained under this category indicate significant difference in water access and hygiene subcategories. Therefore, the hypothesis, which states that “there is no significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to educational attainment” is rejected.

Table 3.4 Differences in the health and well-being practices as perceived by selected residents in terms of educational attainment

SOURCES OF VARIATION		Sum of Squares	df	Mean Square	F	Sig.	Description
Water Access	Between Groups	5.090	3	1.697	4.938	.003	Significant
	Within Groups	39.860	116	.344			
	Total	44.950	119				
Sanitation	Between Groups	.708	3	.236	.426	.734	Not Significant
	Within Groups	64.158	116	.553			
	Total	64.866	119				
Hygiene	Between Groups	3.858	3	1.286	4.437	.006	Significant
	Within Groups	34.394	116	.297			
	Total	38.252	119				

Significance at alpha 0.05

3.5 Health and Well-being Practices in terms of occupation

Table 3.5 shows the difference in the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of occupation. It can be gleaned from this table that, generally,

the overall mean differences and t-values obtained under this category indicate significant difference. Therefore, the hypothesis, which states that “there is no significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to occupation” is rejected.

Table 3.5 Differences in the health and well-being practices as perceived by selected residents in terms of occupation

SOURCES OF VARIATION		Sum of Squares	df	Mean Square	F	Sig.	Description
Water Access	Between Groups	3.795	2	1.897	5.394	.006	
	Within Groups	41.155	117	.352			Significant
	Total	44.950	119				
Sanitation	Between Groups	7.810	2	3.905	8.008	.001	
	Within Groups	57.056	117	.488			Significant
	Total	64.866	119				
Hygiene	Between Groups	2.449	2	1.224	4.001	.021	
	Within Groups	35.803	117	.306			Significant
	Total	38.252	119				

Significance at alpha 0.05

3.6 Health and Well-being Practices in terms of number of family members in the household

Table 3.6 shows the difference in the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of number of family members in the household. It can be gleaned from this table that, generally, the overall mean differences and t-values obtained under this category indicate no significant difference. Therefore, the hypothesis, which states that “there is no significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to number of family members in the household” is accepted.

Table 3.6 Differences in the health and well-being practices as perceived by selected residents in terms of number of family members in the household

SOURCES OF VARIATION		Sum of Squares	df	Mean Square	F	Sig.	Description
Water Access	Between Groups	4.038	10	.404	1.076	.387	Not
	Within Groups	40.912	109	.375			Significant
	Total	44.950	119				
Sanitation	Between Groups	7.500	10	.750	1.425	.179	Not
	Within Groups	57.366	109	.526			Significant
	Total	64.866	119				
Hygiene	Between Groups	2.297	10	.230	.696	.726	Not
	Within Groups	35.955	109	.330			Significant
	Total	38.252	119				

Significance at alpha 0.05

Question 4. Is there a significant correlation among the subcategories subsumed under the health and well-being practices among selected residents in Luuk, Sulu?

4.1 Correlation among the subcategories subsumed under health and well-being practices

Table 4.1 shows the correlation among the subcategories subsumed under health and well-being practices among selected residents in Luuk, Sulu. It can be gleaned from this table that, there is a highly positive and significantly correlated between water access and sanitation ($r=.676$; $\text{sig}=.000$), moderately positive and significantly correlated between water access and hygiene ($r=.449$; $\text{sig}=.000$), and lowly positive and significantly correlated between sanitation and hygiene ($r=.220$; $p=.012$). Therefore, the hypothesis which states that: “there is no significant correlation among the subcategories subsumed under health and well-being practices among selected residents in Luuk, Sulu,” is hereby rejected.

Table 4.1 Correlation among the subcategories subsumed under health and well-being practices

Variables	Pearson <i>r</i>	Sig.	N	Description
Water Access				
Sanitation	.676**	.000	120	High
Hygiene	.449**	.000	120	Moderate
Sanitation				
Hygiene	.220*	.016	120	Low

Legend: ** Correlation Coefficient is significant at alpha .01; *Correlation Coefficient is significant at alpha .05
Correlation Coefficient Scales Adopted from Hopkins, Will (2002): 0.0-0.1=Nearly Zero; 0.1-0.30=Low; 0.3-0.5 0=Moderate; 0.5-0.7-0=High; 0.7-0.9= Very High; 0.9-1=Nearly Perfect

6. Discussion

Question 2. What is the extent of health and well-being practices of selected residents in Luuk, Sulu in terms of: Water Access; Sanitation; and Hygiene?

2.1 In terms of Water Access

In Thailand, sanitation coverage has significantly increased, especially in urban areas, and 97% of the population has access to clean drinking water, according to the World Bank (2020). In order to improve water quality and sanitation infrastructure, the Thai government has worked with a number of international organizations to implement a number of projects. These projects include the installation of water treatment plants and the expansion of sewage systems (Ministry of Public

Health Thailand, 2021). The Japan Sewage Works Agency (2021) also highlights the significance of maintaining and upgrading these systems in order to address environmental challenges like urbanization and population growth. Wastewater management is especially crucial in crowded places like Tokyo, where incorrect disposal poses a significant danger of pollution. In Japan, advanced wastewater treatment and management techniques are crucial to preventing inadequate sanitation from endangering public health. In Japan, a major component of health promotion programs is hygiene education.

2.2 In terms of Sanitation

According to a China Development Bank report from 2021, many households in rural areas rely on open defecation or inadequate toilets, and rural areas lack the sanitation facilities of urban centers. As a result, the Chinese government continues to prioritize efforts to provide sanitation services to rural populations, with plans to upgrade sanitation infrastructure as part of larger public health objectives. Another crucial component of China's WASH programs is the promotion of hygiene.

2.3 In terms of Hygiene

Another essential element of Thailand's WASH initiatives is hygiene education. To lessen the spread of infectious diseases, the Thai Ministry of Public Health (2020) has launched public health initiatives encouraging handwashing and other cleanliness habits. These programs stress the value of hand hygiene in preventing illnesses, especially those aimed at community centers and schools. In order to promote proper hygiene habits from an early age, hygiene education is frequently included in school curricula and community health campaigns, according to the National Institute of Public Health (2021). Proper hand hygiene is emphasized in public health initiatives, such those run by the Korean Centers for Disease Control and Prevention (KCDC, 2021), as a key strategy for halting the spread of infectious diseases, especially during the COVID-19 pandemic and seasonal flu outbreaks. According to research, encouraging handwashing can greatly lower the spread of respiratory and gastrointestinal illnesses, particularly in public places like schools (KCDC, 2021).

Question 3. Is there a significant difference in the extent of health and well-being practices of selected residents in Luuk, Sulu when data are categorized according to this demographic profile: Gender; Age; Civil Status; Educational Attainment; Occupation; and Number of Family Members in the Household?

3.1 Health and Well-being Practices in terms of Gender

The better community water point infrastructure development that lessens gender-specific fetching responsibilities in Mindanao was highlighted by Araune et al. (2024). The general Islamic principles in Mindanao can also be credited with the parity in sanitation. In addition, the gender-differentiated access to health education that is shown in Philippine communities is consistent with the notable disparity in cleanliness practices (Araune et al., 2024). In line with the conclusions of Caruso, B.A., et al. Women were positioned as the keepers of household hygiene in 2021 due to societal expectations.

3.2 Health and Well-being Practices in terms of age

The lack of age-based differences is a result of effective community-led initiatives that have been reported in Sulu. According to Olarte (2024), cross-generational health education programs, like those on hygiene and water purification, have been standardized for all age groups. Additionally, Ortega et al. (2023) highlighted the generational shared traditional health beliefs that support dependable practices like the communal water management systems seen in indigenous Sulu communities..

3.3 Health and Well-being Practices in terms of civil status

Ballesteros's (2022) findings that 78% of homes are intergenerational, ensuring shared caregiving regardless of marital status, demonstrate how Sulu's community institutions counteract civil status inequalities. De Guzman (2022) also highlighted the standardized hygiene measures that have been used to protect the public's health. Additionally, according to current Philippine Statistics Authority reports, 92% of Sulu's barangays use common water sources that are controlled by traditional authority.

3.4 Health and Well-being Practices in terms of educational attainment

Through knowledge transmission from schools to homes, DepEd's WASH programs disproportionately benefit educated households, according to Situation of Children of the Philippines insights 2024. Educational gaps are sustained because 44% of schools in Sulu lack basic water services and 21.2% of schools lack hygienic facilities.

3.5 Health and Well-being Practices in terms of occupation

These results demonstrate that one important socioeconomic factor of health in Sulu is occupation. In BARMM, 78% of formal sector workers and 12% of informal workers received Ministry-led WASH training, which can corroborate the findings of a notable occupational disparity.

3.6 Health and Well-being Practices in terms of number of family members in the household

Only 60% of Sulu households have consistent access to clean, drinkable water, according to the Bangsamoro Planning and Development Authority (BPDA, 2020). This table shows that, on average, the overall mean differences and t-values obtained under this category indicate no significant difference.

Question 4. Is there a significant correlation among the subcategories subsumed under the health and well-being practices among selected residents in Luuk, Sulu?

4.1 Correlation among the subcategories subsumed under health and well-being practices

There is a highly positive and significant correlation between water access and sanitation ($r=.676$; $\text{sig}=.000$), a moderately positive and significant correlation between water access and hygiene ($r=.449$; $\text{sig}=.000$), and a lowly positive and significant correlation between sanitation and hygiene ($r=.220$; $p=.012$). These results demonstrate a positive significant correlation among the subcategories, including water access, sanitation, and hygiene, as they are subsumed under health and well-being practices as seen by a sample of Luuk, Sulu.

7. Conclusion

Sulu are adequately represented among the chosen resident-respondents in Luuk, according to the study's findings, in terms of age, gender, civil status, level of education, occupation, and the number of family members living in the home. Selected Luuk, Sulu locals generally encourage healthy lifestyle choices in their community to a moderate extent. This study discovered that, when data were categorized by occupation, educational achievement, and gender, there was a substantial variation in the health and well-being behaviors of a subset of inhabitants in Luuk, Sulu. However, when data were grouped by number of family members in the household, gender, and civil status, no significant differences were found. The study's overall noteworthy results demonstrate the perceived advantages of WASH practices in fostering improved health and wellbeing. This is consistent with the Social-Ecological Model, which emphasizes the importance of behavior influenced by social, environmental, and individual factors. Furthermore, the health belief model emphasizes how people's perceptions of health risks and benefits influence their behavior. Additionally, according to the idea of planned behavior, behavioral intentions are influenced by attitudes, subjective standards, and perceived behavioral control. These provide an explanation for

the study's findings on the degree and noteworthy variations in the implication of health and well-being behaviors among the chosen residents of Luuk, Sulu. Nonetheless, these support the core idea that community involvement and health campaigns play a crucial role in fostering improved community health and well-being, which explains the various government initiatives pertaining to health. This study emphasizes the very positive significant correlation between sanitation and water access, the moderately positive significant correlation between water access and hygiene, and the lowly positive significant correlation between sanitation and hygiene due to the significant association.

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