International Journal on Culture, History, and Religion
https://ijchr.net | eISSN: 3028-1318

Received: May 14, 2025 | Accepted: June 30, 2025 | Published: July 11, 2025
Volume 7 Special Issue 2 | doi: https://doi.org/10.63931/ijchr.v7iSI2.185

Article

Near or far? Exploring Clinic Proximity and Antimicrobial Cultural Beliefs

Jennifer V. Castillano, Sheila G. Magaloma, Jether P. Sumpo, Rovy M. Banguis, Ivy F. Amante, and Norhanie D. Macarao

[1]Mindanao State University - Buug

Correspondence: jennifer.castillano@msubuug.edu.ph

Abstract

This study measured the level of correct cultural beliefs on antimicrobial use among residents of two barangays situated at varying distances from Horizon Medical Clinic in Lakewood, Zamboanga del Sur. Using a structured survey, data were collected from 100 respondents—50 from the barangay nearest to the clinic and 50 from the farthest. The study aimed to determine whether proximity to a healthcare facility with antimicrobial stewardship guidelines influences the correctness of cultural beliefs related to antibiotic use. Descriptive statistics, a test of normality, and the Mann-Whitney U test were employed to analyze the data. Results revealed that while certain misconceptions persist, such as reliance on herbal remedies and gender-restricted health roles, the overall level of correct cultural beliefs was moderately low in both communities. Statistical analysis showed no significant difference between the two groups ($p > 0.05$), indicating that physical proximity to the clinic did not significantly affect the respondents' beliefs. These findings underscore the need for inclusive, community-wide health education interventions that go beyond geographic considerations to address cultural misconceptions and promote responsible antibiotic use.

Keywords: *antimicrobial resistance, cultural beliefs, quantitative, Zamboanga Sibugay, Philippines, Asia*

Suggested citation:

Castillano, J., Magolama, S., Sumpo, J., Banguis, R., Amante, I., & Macarao, N. (2025). Near or far? Exploring Clinic Proximity and Antimicrobial Cultural Beliefs. *International Journal on Culture, History, and Religion, 7*(SI2), 203-218. https://doi.org/10.63931/ijchr.v7iSI2.185

Introduction

Are antimicrobials wondrous or dangerous? Correct cultural beliefs about antimicrobials can be beneficial, but incorrect cultural beliefs can lead to misuse and overuse, posing serious risks to human health. Undoubtedly, the use of antimicrobials has extended human lifespan. Antimicrobials have proven their worth in the modern world, from treating infectious diseases to enabling modern medical procedures (Fair & Tor, 2014). However, antimicrobials, which are intended to kill life-threatening bacteria and fungi, have now become contributing factors to the emergence of a global health concern known as antimicrobial resistance (Pantosti et al., 2015). This makes infections untreatable because bacteria and fungi have developed the ability to resist antimicrobials (Papadimou et al., 2022).

Human activities primarily cause the phenomenon of antimicrobial resistance. The overreliance on misuse and overuse of antimicrobials, without regard for the dangers they may cause, has significantly contributed to the antimicrobial resistance that the world is facing and must overcome. However, correct cultural beliefs about antimicrobials can save lives and combat antimicrobial resistance.

According to McCullough et al. (2016), correct beliefs about antimicrobial use align with evidence-based medical guidelines, discourage inappropriate usage, and help prevent the development of resistance (McCullough et al., 2016). Admittedly, correct cultural beliefs on antimicrobial use are common among healthcare professionals. Typically, health care is done in hospitals, clinics, and similar establishments. Thus, cultural beliefs regarding antimicrobial use may be primarily influenced by the distance of residences from antibiotic-aware establishments.

In this context, the researchers deemed it appropriate to investigate the cultural beliefs related to antimicrobial use of the communities near and farthest from the hospital to uncover the correctness of their cultural beliefs and their alignment with medical guidelines. This study examines the cultural beliefs related to antimicrobial use in the communities of Lakewood, Zamboanga del Sur, Philippines by measuring their correct cultural beliefs. To gain a comprehensive understanding, the researchers compared the correct cultural beliefs related to antimicrobial use among the residents from the barangays nearest to and farthest from the clinic.

Objectives

1. What is the level of correct cultural beliefs related to antimicrobial use among residents living near the clinic vicinity?

2. What is the level of correct cultural beliefs related to antimicrobial use among residents living far from the clinic?
3. Is there a significant difference in the levels of correct cultural beliefs related to antimicrobial use between residents living near and far from the clinic vicinity?

Rationale/Significance

Antimicrobials are powerful medications, but they can also be potentially harmful because they are the primary contributor to the emergence of antimicrobial resistance. However, there are ways to combat antimicrobial resistance. Correct cultural beliefs are essential. Thus, the results of this study on the level of correct cultural beliefs related to antimicrobial use would be beneficial for several reasons. First, the study's outcome is expected to provide the residents of Lakewood, Zamboanga del Sur, with information on the correctness of their cultural beliefs related to antimicrobial use, to encourage them to maintain positive beliefs and improve negative ones. Second, it will push the local government units to include the most-needed information drive about antibiotics and antimicrobial resistance in their municipal development plan. Third, this study may encourage society to evaluate its positive and negative contributions to the fight against antimicrobial resistance and do something about it. Furthermore, fourth, the outcome of the study may serve as an eye-opener for local and national governments to make necessary interventions, through policies or programs, for communities to correct their cultural beliefs to curb antimicrobial resistance.

Scientific Basis/ Theoretical Framework

It is alarming that, while residents turn to antimicrobials such as antibiotics available to treat infections, the danger of antimicrobial resistance is lurking. The more humans over-rely on, misuse, and overuse antibiotics, the more microbes will become resistant.

Antibiotic resistance is a complex phenomenon heavily influenced by social, cultural, and behavioral factors, among others, that lead to the misuse, overuse, and abuse of antibiotics (Papadimou et al., 2022). The misuse and overuse of antimicrobials in humans, animals, and plants are the main drivers in developing drug-resistant pathogens (Laxminarayan et al., 2013).

Thus, the present study aims to measure the levels of correct cultural beliefs regarding antimicrobial use in the communities of Lakewood, Zamboanga del Sur vis-à-vis their residential distance from the clinic vicinity in the hope of mitigating

antimicrobial resistance through cultural beliefs intervention and to examine further whether there is a significant difference in these levels (Figure 1).

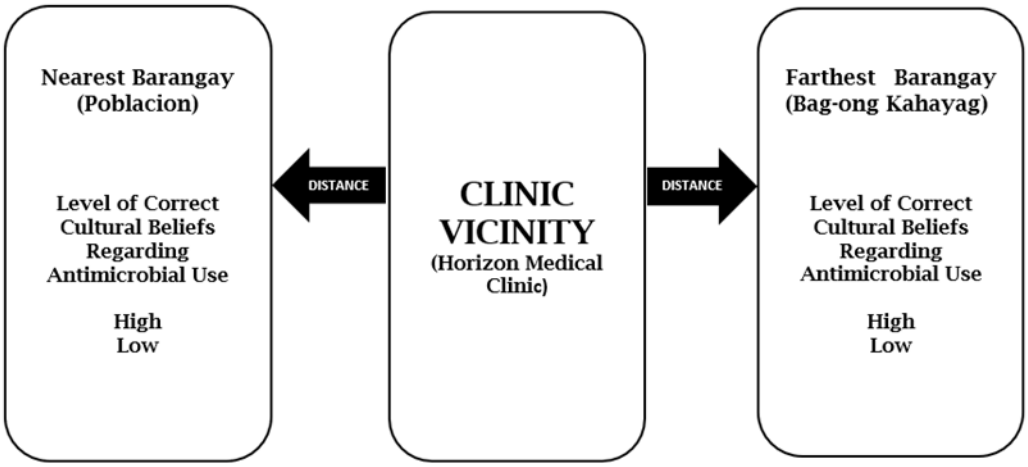

Fig. 1. Conceptual paradigm comparing the levels of correct cultural beliefs on antimicrobial use among residents of the nearest and farthest barangays of Lakewood, Zamboanga del Sur, Philippines

Review of Literature

Antimicrobial resistance (AMR) presents a significant global health challenge, jeopardizing the effectiveness of antibiotics and other antimicrobial agents. As the prevalence of AMR continues to rise, understanding its multifaceted dynamics becomes imperative for effective intervention strategies. This review aims to synthesize and analyze existing literature on antimicrobial resistance, exploring its emergence, consequences, human participation, and contribution to the increase and decrease of AMR.

"Antibiotic Prescribing and Use" discusses how antimicrobial resistance occurs. It explains that antimicrobial resistance occurs when germs, bacteria, or fungi stop responding to drugs designed to kill them. Effective antibiotic stewardship guides appropriate prescribing practices and minimizes resistance risks (Dyar et al., 2017). Further, the article discusses how the unnecessary and improper use of antibiotics can lead to negative consequences. Therefore, whenever antibiotics are indiscriminately used, they can contribute to antimicrobial resistance.

Antibiotic resistance continues to be a global health dilemma of the 21st century. The consequences of failing to address AMR adequately are profound, with estimations of a return to the pre-antibiotic era, where everyday infections could be potentially life-threatening (Tang et al., 2023). Hence, everyone has a role to play in improving the use of antibiotics and in controlling the eventual outcome of antimicrobial resistance.

The ordinary people's public awareness and health literacy need to be further emphasized as part of local and global action plans (Tang et al., 2023). Thus, human factors, such as cultural beliefs, which are likely to contribute to increasing or decreasing AMR incidence, must be unlocked.

In a qualitative exploration titled 'Socio-cultural Determinants of Antibiotic Resistance: Insights from Greek Attitudes, Perceptions, and Values,' it was discovered that the entrenched practice of antibiotic consumption is intricately woven into the fabric of Greek society. Factors such as convenient access, societal norms, and overarching cultural behaviors significantly shape this phenomenon (Papadimou et al., 2022).

In 2019, a comprehensive study investigated the understanding of antibiotic use and resistance among medical students at a Nigerian university. The research highlighted several key findings. Firstly, it underscored the critical connection between indiscriminate antimicrobial drug use and the emergence of antimicrobial resistance, emphasizing the gravity of this public health challenge. Secondly, it revealed that while a significant portion of students occasionally sought medical advice before using antibiotics, a minority consistently did so. Additionally, the study found that most students discontinued antibiotic use once they felt better. Notably, the assessment of overall knowledge on antimicrobial resistance indicated that 64.7% of respondents demonstrated a commendable understanding, whereas only 56.0% exhibited appropriate practices in antimicrobial use (Okedo-Alex et al., 2019). It is important to highlight that the participants in this study were medical students in their final years of study, suggesting a baseline level of medical knowledge. However, the findings indicate a need for enhanced education and awareness programs on antibiotic resistance within medical education curricula and beyond.

With cultural beliefs being among the contributory factors for the emergence of antimicrobial resistance, research studies along this line would be beneficial.

Methodology

Research Design

The descriptive study aims to measure the level of correct cultural beliefs related to antimicrobial use among the residents of Lakewood, Zamboanga del Sur, and interpret them descriptively as high or low. The study includes ten (10) cultural belief statements related to antimicrobial use, which can be correct or incorrect based on the definition provided by the World Health Organization (WHO). Also, this quantitative research aims to measure the respondents' level of correct cultural beliefs. Further, the study compares and analyzes gathered quantitative responses of the

respondents to draw comparisons of responses from residents living in different proximity to the clinic and determine whether a significant difference exists.

Locale of the Study

The study was conducted in two barangays of Lakewood, Zamboanga Sibugay, Philippines, specifically Barangay Poblacion and Barangay Bag-ong Kahayag. Lakewood is a 4th-class landlocked municipality located inland in the province of Zamboanga del Sur, composed of 14 barangays. Barangay Poblacion is the nearest to Horizon Medical Clinic, the study's reference point. Barangay Bag-ong Kahayag is the farthest, about 9.2 kilometers or a 13-minute ride from the Horizon Medical Clinic (https://www.google.com/maps/dir/Lakewood+Municipal+Hall).

Respondents

The participants of the study total 100, all are residents of Lakewood, Zamboanga del Sur; 50 of them are residents of Barangay Poblacion, the nearest barangay to Horizon Medical Clinic, while the other 50 are residents of Barangay Bag-ong Kahayag, the farthest barangay from the clinic.

Sampling Technique

Quota sampling was used in the study for the following reasons: (1) it allows for a comparison based on predetermined criteria, specifically the residential distance from healthcare facility; (2) it enables the researchers to explore potential disparities in cultural beliefs related to antimicrobial use only; (3) the study focused on two different sub-groups, the residents of the barangay nearest and farthest from the hospital; (4) the primary purpose is to compare the different groups and determine whether or not there is significant difference; (5) time and budget constraints; and, (6) the participants are hard to access given the remoteness of the area, less population and are out for work.

Data Gathering Instrument Used and Procedure

Primary data were collected using a survey interview schedule translated into the Visayan vernacular, with responses limited to "Yes" or "No." The interview was conducted in person, and the survey interview schedule consisted of four (4) blocks. Block C focused on assessing the residents' cultural beliefs regarding antimicrobial

use. For this purpose, ten items (statements) are included in the survey interview schedule. These are: (1) I think that antibiotics are made by business people to profit rather than to cure; (2) I do not believe in taking antibiotics for 7 days when I can get better after two days; (3) I can use a friend's prescription for a similar condition; (4) I instead drink herbal medicines rather than take antibiotics, (5) faith healer is better than any antibiotics out there; (6) following the doctor's prescription of antibiotics will facilitate the treatment; (7) seeing a doctor immediately when something wrong is felt within the body is the best way to get well fast; (8) only the mother and not the father may give antibiotics medication to their child; (9) a wife cannot take antibiotics if the husband does not agree to it; (10) and a mother buys antibiotics for her child if her husband will not give permission. These statements are indicators of the correctness of the respondents' cultural beliefs on antimicrobial use.

Proper protocol was observed to ensure the survey was conducted ethically and responsibly, with mutual trust, respect, and fairness in mind. The team leaders made a courtesy visit to the municipal mayor's office before conducting data gathering. Before the interview, respondents were informed of the research's purpose, participant selection, voluntary participation, procedures, duration, risks, benefits, non-monetary compensation for participation, confidentiality, sharing of results, right to refuse or withdraw, and who to contact in case of inquiry. A certificate of consent was prepared for the respondents to affix their signature/thumbmark signifying approval to participate. Further, this study adhered to ethical standards in conducting research and reporting. Artificial intelligence (AI) tools were used for grammar correction and language editing to improve the manuscript's clarity.

Statistical Tools and Data Analysis

The data generated from the questionnaire were analyzed according to the study's specific objectives. The responses from the questionnaire were consolidated, tabulated, and analyzed to describe the collected data. Descriptive statistics, such as the weighted mean and standard deviation, were used in this study to determine the levels of correct cultural beliefs related to antimicrobial use among the residents. The scale of 0.00-0.50 describes the level as Low, while the scale of 0.51-1.00 interprets the level as High. Additionally, the Shapiro-Wilk Test was used to assess the assumption of normality in the statistical analyses and determined that non-parametric tests are appropriate. The Mann-Whitney U-test was used to determine if there is a significant difference in the levels of correct cultural beliefs between residents living near and far from the clinic vicinity.

Results and Discussions

What is the level of correct cultural beliefs regarding antimicrobial use among residents of the nearest barangay?

Table 4.1: Level of Correct Cultural Beliefs Regarding Antimicrobial Use Among Residents of the Nearest Barangay (Poblacion) to the Horizon Medical Clinic

Item No.	Cultural Belief Statements	Correct Belief?	No	Yes	Total	WM	SD	DI
1	I think that businesspeople make antibiotics to profit rather than to cure.	Incorrect	36	14	50	0.28	0.45	Low
2	I do not believe in taking antibiotics for 7 days when I can get better after two days.	Incorrect	28	22	50	0.44	0.50	Low
3	I can use a friend's prescription for a similar condition.	Incorrect	40	10	50	0.20	0.40	Low
4	I would rather drink herbal medicines than take antibiotics.	Incorrect	24	26	50	0.52	0.50	High
5	Faith healer is better than any antibiotics out there.	Incorrect	42	8	50	0.16	0.37	Low
6	Following the doctor's prescription of antibiotics will facilitate the treatment.	Correct	5	45	50	0.90	0.30	High
7	Seeing a doctor immediately when something is felt within the body is the best way to get well fast.	Correct	5	45	50	0.90	0.30	High
8	Only the mother and not the father may give antibiotics to their child.	Incorrect	39	11	50	0.22	0.42	Low
9	A wife cannot take antibiotics if her husband does not agree to it.	Incorrect	36	14	50	0.28	0.45	Low
10	A mother buys antibiotics for her child if her husband will not give permission.	Incorrect	34	16	50	0.32	0.47	Low
—	**General Weighted Mean**		—	—	—	**0.45**	**0.48**	**Low**

Legend: WM=" Weighted Mean", SD=" Standard Deviation", DI=" Descriptive Interpretation"

The mean weighted score of 0.45 for individuals in the nearest barangay to the clinic (Poblacion) indicates an insufficient level of appropriate cultural perceptions regarding the use of antimicrobials. This suggests there are persistent, outdated beliefs, despite the presence of some accurate ones, especially after interacting with healthcare workers. The significant standard deviation (0.48) indicates that those who responded to the questions better grasped the matter. This demonstrates the combination of

enduring cultural misconceptions alongside fragmented, accurate biomedical understanding.

Analyzing the survey questions reveals the magnitude of the inaccuracies. Only 28% of respondents combating the misconception that antibiotics stem solely from a profit motive (Item 1) were accurately labeled. This reinforces the argument proposed by McCullough et al. (2016), where skepticism toward pharmaceutical companies results in diminished trust in the efficacy of antibiotics. Such skepticism ultimately results in misuse and overconsumption. The low agreement rate of 20% for Item 3 regarding the use of a friend's medication demonstrates a complete disregard for safety considerations involving prescriptions. This is reminiscent of the Southeast Asian trend where individuals could obtain antibiotics without restrictions (Widayati et al., 2011). An overwhelming majority, 84%, believe that faith healers supersede the effectiveness of antibiotics. This illustrates the predominance of traditional medicine over modern, scientifically tested methods, a characteristic of rural health systems globally (Radyowijati & Haak, 2003).

The notion that only mothers can administer antibiotics, or that a wife requires a husband's approval for any action, is a strange gender-based myth illustrative of the intersection of patriarchal norms with healthcare philosophies and practices. These findings are comparable to those of Haenssgen et al. (2018) in Thailand and Laos, which identified similar culturally motivated restrictions regarding gender-based independent choices about healthcare. Amidst these issues, there were two positive, high-scoring items. Item 6 received agreement from 90% of respondents, stating that following medical advice was important. Similarly, that same percentage agreed with Item 7, which noted that prompt medical assistance benefits one's health. These affirmations suggest cultural understandings, especially those viewed through a clinical, authoritative lens, accept specific biological ideas. This aligns with Dyar et al. (2017), who noted that growing awareness about the correct use of antibiotics does not apply universally and remains situational.

As for Item 4, an inverted paradox was demonstrated as 52% of respondents preferred herbal medicine over antibiotics. Even considering Iv's high rating on the utilized scale, it suggests that numerous individuals do not comprehend it. This is not indicative of better alternatives existing. Kim et al. (2011) found that this preference is predominantly based on the fear of potential side effects and a general distrust of healthcare services. Luc et al. (2022) pointed out that behavior change strategies must consider other cultures and communities' social frameworks. There is evidence that some populations require specialized and targeted teaching interventions, as evidenced by the respondents' contrasting beliefs. These findings demonstrate that

one-size-fits-all strategies are ineffective. André et al. (2010) further emphasized that addressing entrenched socio-cultural views regarding medication use goes far beyond superficial advertising—it demands sustained community engagement.

What is the level of correct cultural beliefs regarding antimicrobial use among residents of the farthest barangay?

Table 4.2: Level of Correct Cultural Beliefs Regarding Antimicrobial Use Among Residents of the Farthest Barangay (Bag-ong Kahayag) From the Horizon Medical Clinic

Item No.	Cultural Belief Statements	Correct Answer	No	Yes	Total	WM	SD	DI
1	I think that businesspeople make antibiotics to profit rather than to cure.	Incorrect	40	10	50	0.80	0.40	High
2	I do not believe in taking antibiotics for 7 days when I can get better after two days.	Incorrect	33	17	50	0.66	0.47	High
3	I can use a friend's prescription for a similar condition.	Incorrect	39	11	50	0.78	0.41	High
4	I would rather drink herbal medicines than take antibiotics.	Incorrect	12	38	50	0.24	0.43	Very Low
5	Faith healer is better than any antibiotics out there.	Incorrect	38	12	50	0.76	0.43	High
6	Following the doctor's prescription of antibiotics will facilitate the treatment.	Correct	3	47	50	0.94	0.24	High
7	Seeing a doctor immediately when something is felt within the body is the best way to get well fast.	Correct	4	46	50	0.92	0.27	High
8	Only the mother and not the father may give antibiotic medication to their child.	Incorrect	47	3	50	0.94	0.24	High
9	A wife cannot take antibiotics if her husband does not agree to it.	Incorrect	45	5	50	0.90	0.30	High
10	A mother buys antibiotics for her child if her husband will not give permission.	Incorrect	46	4	50	0.92	0.27	High
—	**General Weighted Mean**	—	—	—	—	**0.79**	**0.20**	**High**

Legend: WM=" Weighted Mean", SD=" Standard Deviation", DI=" Descriptive Interpretation

Based on the responses from the farthest barangay (Bag-ong Kahayag), they reasonably understand the appropriate use of antimicrobials with a general weighted mean of 0.79 and a standard deviation of 0.20. This degree of both the measure and variance indicates that this community adheres to the customs and habits of its community and suggests that antibiotic utilization is done responsibly and consistently.

Remarkably, 80% of respondents disagreed that antibiotics are produced primarily to generate profits. This widely held public doubt concerning the motives of pharmaceutical companies runs counter to what was posited by McCullough et al. (2016). More importantly, 94% of respondents agreed that complying with a doctor's

recommendation simplifies treatment, which is consistent with other findings. As noted by Dyar et al. (2017), an increasing number of people from diverse demographics are aware of the principles and practices of stewardship.

In addition, this barangay exhibited a pronounced rejection of health roles ascribed to a single gender. For instance, 94% opposed the notion that only mothers can administer antibiotics, while 90% disagreed with the proposition that wives require their husbands' consent for treatment. These findings indicate that attitudes regarding gender equity in healthcare and evolving socio-cultural norms within other developing regions, as Haenssgen et al. (2018) noted, are shifting. Despite these positive aspects, there remain some concerns. For example, only 24% of participants disagreed with the statement, *"Herbal remedies should be used instead of antibiotics."* This finding received a *"Very Low"* interpretation, which points to the enduring significance of traditional medicine, particularly in rural settings. As noted by Kim et al. (2011), these kinds of preferences tend to be shaped by cultural norms, availability, and a prevailing fear of drug side effects.

Another grave mistake is not adhering to antibiotic prescriptions. Of the respondents, 66% acknowledged that they needed to complete an antibiotic course, but a staggering 34% believed they could stop taking the medication once symptoms had resolved. This self-destructive tendency has been documented by Widayati et al. (2011) and Huttner et al. (2010), and it continues to pose challenges for global antimicrobial stewardship because incomplete courses facilitate the emergence of resistant pathogens. The findings bolster the notion that community teaching alone is insufficient. *"Culturally rooted beliefs,"* as André et al. (2010) noted, require locally tailored, enduring solutions. Radyowijati and Haak (2003) emphasized that improving the use of antibiotics in resource-poor areas requires addressing social trust systems, not simply providing biomedical information.

These results suggested that antimicrobial literacy is improving, as Bag-ong Kahayag respondents performed well on the test. However, because culturally embedded misconceptions persist, there is a need for multi-sectoral, behavior-focused frameworks. Luc et al. (2022) and Barker et al. (2017) argue that communities must be

empowered, and tailored communication strategies must be designed to promote sustained antibiotic stewardship.

Is there a significant difference in the levels of correct cultural beliefs related to antimicrobial use between the nearest and farthest communities from the clinic's vicinity?

Table 4.3 Test of Normality

Variables	Shapiro-Wilk	
	Statistic	P-value
Knowledge on Antimicrobial Use	0.962	.006
Cultural Beliefs on Antimicrobial Use	0.923	<.001
Health-Seeking Behavior	0.927	<.001

Table 4.3 presents the result of the Shapiro-Wilk test for normality on the cultural beliefs related to antimicrobial use. The test yielded a p-value of less than 0.05, indicating that the data deviate from a normal distribution. Therefore, a non-parametric test was employed to assess the significant difference in cultural beliefs between the nearest and farthest communities from the clinic's vicinity.

Table 4.4 Testing of Differences on the Respondents' Cultural Beliefs on Antimicrobial Use When Grouped According to the Distance of the Barangay from the Clinic

Dependent Variable	**Barangay**						**Statistic**	**p**	**Interpretation**
	Poblacion (Nearest)			**Bag-ong Kahayag (Farthest)**					
	M	**SD**	**n**	**M**	**SD**	**n**			
Knowledge of Antimicrobials' Use	0.621	0.151	50	0.671	0.163	50	1040	.145	Not Significant

Legends: M=Mean; SD=Standard Deviation; n=Number of Sample; t=calculated t; p=Probability Value

As shown in Table 4.4, the results from the Mann-Whitney U test on the effect of distance to a healthcare institution (clinic) on residents' cultural attitudes about antimicrobial use have been presented. The analysis indicates that there is no significant difference in the beliefs held by respondents from Poblacion (M = 0.422, SD = 0.181) and those from Bag-ong Kahayag (M = 0.386, SD = 0.141) with U = 1139, p = .433, which is greater than the conventional 0.05. This suggests that the distance to the clinic does not have a notable influence on cultural attitudes toward the use of antibiotics.

These results contradict the assumption that tangible distance to health care services leads to better understanding by the public regarding the use of antibiotics. McCullough et al. (2016) also reported similar findings in one such multi-country study. They concluded that the knowledge and perceptions about antibiotic resistance were not significantly enhanced by the physical proximity to clinics but by focused educational programs and public health interventions.

Haenssgen et al. (2018) argued that the socio-cultural factors, trust frameworks, and prior patient experiences greatly influence healthcare seeking behavior and antibiotic awareness, as opposed to simply distance to formal healthcare services. People will continue relying on traditional, herbal, or informal referral networks until educational initiatives shift prevailing norms. A pertinent study by Radyowijati and Haak (2003) examined the use of antibiotics and suggested that behavioral change not only requires framework structural accessibility but also engagement with local culture and antibiotic belief systems. Undoubtedly, public health literacy and trust in the health care system often eclipse clinic location (André et al., 2010).

The lack of significant change in cultural perceptions bolsters Dyar et al.'s (2017) notion that antimicrobial stewardship strategies should prioritize communities instead of regions and implement norm-shifting, behavior-centered approaches to address antibiotic use on a broader scale. Therefore, the findings of this study make a case for the need for tailored interventions within the radius of where people live, citing low knowledge and negative perceptions of antibiotics.

Conclusions

Antimicrobials are wondrous yet potentially dangerous. They can kill life-threatening bacteria and fungi but also give rise to microscopic monsters in a real-life phenomenon known as antimicrobial resistance (AMR). This threat does not occur on its own. It is fueled by human actions, particularly the misuse and overuse of antimicrobials, often rooted in incorrect cultural beliefs about how these medicines

should be used. Undoubtedly, correct cultural beliefs on the use of antimicrobials are one of the ways to combat antimicrobial resistance.

The data gathered on the levels of correct cultural beliefs among residents living in the barangays nearest to and farthest from the Horizon Medical Clinic, a healthcare facility that follows antimicrobial use guidelines, provides valuable insights into which cultural beliefs should be reinforced and which need improvement.

Concerning the levels of correct cultural beliefs, the findings from the barangay nearest to the clinic reveal that the community essentially holds incorrect cultural beliefs about antibiotic use. Although there are instances of correct cultural beliefs, many residents continue to adhere to traditional misconceptions, including a preference for herbal treatments, gender-restricted health roles, and the inappropriate use of prescriptions. These results highlight a critical need for targeted health education programs to correct these misconceptions and to promote responsible, evidence-based antibiotic use. In contrast, data from the barangay farthest from the clinic indicate that most respondents hold correct and responsible beliefs regarding antibiotic use. Nevertheless, lingering traditional beliefs persist, particularly in areas such as incomplete antibiotic courses and reliance on herbal alternatives. To build on the community's strengths, focused educational interventions are still recommended to address these residual misconceptions and improve public health outcomes.

Concerning the levels of correct cultural beliefs, the findings indicate no significant difference in the levels of correct cultural beliefs between residents of the barangays nearest to and farthest from the clinic. This suggests that proximity to a healthcare facility with antimicrobial guidelines does not automatically translate to more accurate beliefs about antibiotic use. Therefore, health education interventions must be community-wide and inclusive, regardless of geographic location, to effectively address misconceptions and promote responsible antimicrobial practices.

The reinforcement of correct cultural beliefs and the correction of misconceptions about antimicrobial use are the responsibility of everyone, not just the communities in Lakewood, Zamboanga del Sur, not just their local government units, and not just the national government, but of society. Our collective obligation is to reflect on our positive and negative contributions to the fight against antimicrobial resistance. This is a fight we must win.

References

[1] André, M., Vernby, Å., Berg, J., & Lundborg, C. S. (2010). A survey of public knowledge and awareness about antibiotic use and resistance in Sweden. Social

Science & Medicine, 70(2), 194–200. https://doi.org/10.1016/j.socscimed.2010.05.012

[2] Barker, A. K., Brown, K., Ahsan, M., Sengupta, S., Safdar, N., & Ahmed, S. (2017). Social determinants of antibiotic misuse: A qualitative study of community members in Haryana, India. Antibiotics, 6(4), 31. https://doi.org/10.3390/antibiotics6040031

[3] Dyar, O. J., Huttner, B., Schouten, J., & Pulcini, C. (2017). What is antimicrobial stewardship? Journal of Global Antimicrobial Resistance, 7, 27–30. https://doi.org/10.1016/j.jgar.2017.06.013

[4] Fair, R. J., & Tor, Y. (2014). Antibiotics and bacterial resistance in the 21st century. Perspectives in Medicinal Chemistry, 6, 25–64. https://doi.org/10.1038/nrd4271

[5] Haenssgen, M. J., Charoenboon, N., Althaus, T., & Lubell, Y. (2018). The social role of C-reactive protein point-of-care testing to guide antibiotic prescription in Northern Thailand. Health Policy and Planning, 33(5), 564–572. https://doi.org/10.1093/heapol/czy038

[6] Huttner, B., Goossens, H., Verheij, T., & Harbarth, S. (2010). Characteristics and outcomes of public campaigns aimed at improving the use of antibiotics in outpatients in high-income countries. The Lancet Infectious Diseases, 10(1), 17–31. https://doi.org/10.1016/j.drugalcdep.2010.08.002

[7] Kim, H. K., Lee, M., & Shin, Y. (2011). Consumers' knowledge and behaviors regarding antibiotic use for upper respiratory tract infections in South Korea. Health Communication, 26(8), 743–752. https://doi.org/10.1080/10410236.2010.543601

[8] Laxminarayan, R., Duse, A., Wattal, C., Zaidi, A. K. M., Wertheim, H. F. L., Sumpradit, N., ... & Cars, O. (2013). Antibiotic resistance—the need for global solutions. The Lancet Infectious Diseases, 13(12), 1057–1098. https://doi.org/10.1016/S0140-6736(13)60898-1

[9] Luc, J. E., Sharma, A. L., Rana, M. S., & Taneja, N. (2022). Behavior-based interventions for optimizing antimicrobial use in low- and middle-income countries: A systematic review. International Journal of Antimicrobial Agents, 60(1), 106607. https://doi.org/10.1016/j.ijantimicag.2022.106607

[10] McCullough, A. R., Parekh, S., Rathbone, J., Del Mar, C. B., & Hoffmann, T. C. (2016). A systematic review of the public's knowledge and beliefs about antibiotic resistance. Family Practice, 33(5), 460–467. https://doi.org/10.1093/fampra/cmw018

[11] Okedo-Alex, I. (2019). Knowledge of antibiotic use and resistance among students at a medical school in Nigeria. The Pan African Medical Journal, 45. https://doi.org/10.11604/pamj.2019.45.130.18891

[12] Papadimou, D., Malmqvist, E., & Ancillotti, M. (2012). Socio-cultural determinants of antibiotic resistance: A qualitative study of Greeks' attitudes, perceptions and values. BMC Public Health, 12, 1103. https://doi.org/10.1186/1471-2458-12-1103

[13] Prestinaci, F., Pezzotti, P., & Pantosti, A. (2015). Antimicrobial resistance: A global phenomenon. Annali dell'Istituto Superiore di Sanità, 51(1), 83–91. https://doi.org/10.4415/ANN_15_01_22

[14] Radyowijati, A., & Haak, H. (2003). Improving antibiotic use in low-income countries: An overview of evidence on determinants. Social Science & Medicine, 57(4), 733–744. https://doi.org/10.1016/S0277-9536(03)00139-4

[15] Tang, K. W. K., Millar, B. C., & Moore, J. E. (2023). Antimicrobial resistance (AMR). British Journal of Biomedical Science, 80(1), 11387. https://doi.org/10.1080/09674845.2023.2233111

[16] Ventola, L. C. (2015). The antibiotic resistance crisis. Pharmacy and Therapeutics, 40(4), 277–283. PMCID: PMC4378521

[17] Wanda, R. (2018). An overview of the antimicrobial resistance mechanisms of bacteria. Antibiotics, 7(3), 56. https://doi.org/10.3390/antibiotics7030056

[18] Widayati, A., Suryawati, S., de Crespigny, C., & Hiller, J. E. (2011). Self-medication with antibiotics in Yogyakarta City, Indonesia: A cross-sectional population-based survey. BMC Health Services Research, 11, 299. https://doi.org/10.1186/1472-6963-11-299