

**LEVEL OF AWARENESS AND EFFECTS OF THE DOH ANTI-MICROBIAL
DRUG RESISTANCE PROGRAM IN BARANGAY KUSIONG,
DOS, MAGUIDANAO**
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Abstract

This study entitled “Level of Awareness and Effects of the DOH Anti-Microbial Drug Resistance Program in Barangay Kusiong DOS Maguindanao” was conducted on the 35 individuals using survey questionnaire and simple interview in data gathering. The study made use of descriptive – qualitative design that used the percentage, mean and Pearson r Correlation in the analysis of data gathered; while, thematic analysis was used in the qualitative data. The findings revealed most of the respondents belong to age bracket of 18 – 22 years old, 26 – 32 years old and 43 – 59 years old, many of them have attained an elementary level of education, female, and from the Bisaya tribe. The level of awareness on the DOH Antimicrobial Drug Resistance Program in the proper use and side effects of antibiotics they are moderately aware. The effectiveness of the program in terms of the benefits in the correct use of antibiotics and information education done by the program about correct use of antibiotics revealed they are effective. There is a significant relationship between the educational attainment and sex and the overall awareness of the respondents on DOH Antimicrobial Drug Resistance Program. There is also a significant relationship between educational attainment and the overall effectiveness of the DOH Antimicrobial Drug Resistance Program. The problems encountered on the program are lack of information sources and difficulties of burying antibiotics without doctor’s prescriptions. The study concludes that they have low knowledge on the DOH Antimicrobial Drug Resistance Program since they are only moderately aware of the proper usage of antibiotics and its side effects.

Keywords: Resistance Program, Anti-microbial drug, antibiotic, DOS Maguindanao

INTRODUCTION

All over the world, current issues on the wrong use of antibiotic become a problem due to drug resistance, if it is not taken appropriately. In many developing countries the antibiotics are sold as over the counter drugs which becomes one of the reasons for the antibiotic resistance and misuse. Unfortunately; misuse of antibiotics is causing the emergence of resistant pathogens making treatment more difficult. The great power of the antibiotic is helpful to patient, however, is presently failing. This failure is due to the increasing bacterial resistance to many antibiotics that once cured bacterial

diseases readily. In other words, many cases now confirmed if not used properly is now unable to destroy the bacteria since microorganism has potential to become dangerous, and perhaps even deadly (Mayo Clinic, 2018).

In the Philippines, doctors confirmed antibiotics are important in treatment of patients; however, its use without the proper prescription from a doctor is dangerous. The Department of Health spearheaded the “National Antibiotic Guidelines” as an advocacy for proper utilization of antibiotic in observance of the 2nd World Antibiotic Awareness Week every November of year to increase awareness of people towards correct use of antibiotics (DOH, 2017).

In Mindanao, the Center of Health and Development XII intensified the implementation of information dissemination program on the correct use of antibiotic by ensuring pharmacies sell only this drug with doctors’ prescription. This can help in ensuring patient’s use of antibiotic is correct and can be helpful and effective in curing their illness. The awareness of people is important in gaining support and cooperation of the people is important in the success of this advocacy which is vital in saving lives of patients (Montaner, 2018).

The researchers decided to conduct this study since it is observed that many people in remote areas are still not aware about the antibiotic resistance, This case is rampant in the community like in Kusiong Datu Odin Sinsuat, Maguindanao, wherein some small store sell antibiotic and people can buy them without doctors’ prescription. The findings of the study may provide data to be able to formulate effective strategies in ensuring effective advocacy towards correct use of antibiotic to guide the people in the community of Barangay Kusiong DOS, Maguindanao.

Review of Related Literature

Proper Use of Antibiotics

In the past years Antibiotics have long been considered the “magic bullet” that would end infectious disease. Although they have improved the health of countless numbers of humans and animals, many antibiotics have also been losing their effectiveness since the beginning of the antibiotic era. Bacteria have adapted defenses against these antibiotics and continue to develop new resistances, even as we develop new antibiotics. At present many kinds of very potent antibiotics are used to cure different types of infection and illness. This have saved lives of many people (WHO, 2017).

Today as microbial species and strains become resistant, many diseases have become difficult to treat, a phenomenon frequently ascribed to both indiscriminate and inappropriate use of antibiotics in human medicine. Also the use of antibiotics and antimicrobials in raising food animals has also contributed significantly to the pool of antibiotic resistant organisms globally and antibiotic resistant bacteria are now found in large numbers in virtually every ecosystem on earth. Thus people must be oriented on how to use the antibiotics appirtey for more effective outcome (Gangle, 2015).

According to the Department of Health (2018), the different groups of people have different practices towards antibiotic utilization. This is often affected by tribal affiliations and educational level wherein the people practices and beliefs towards medicine use affects their behavior towards it.

The National Antibiotic Guidelines (2017) is aimed to optimize antimicrobial use and help improve the quality of patient care and patient safety aims to improve people's understanding on the threats of anti-microbial resistance (AMR) and how each one can contribute to slow down its spread. Participants in these series of events are the healthcare providers in the public and private healthcare facilities, other government agencies, health professional associations, patient groups, academe and students.

Antimicrobial resistance is increasingly becoming a problem also in the Philippines. Drug-resistant organisms have been on the rise as evidenced by the antimicrobial tests in our society. The World Health Organization also provided additional learning through fellowship training programs wherein people were able to fully understand the relationship of antimicrobial use and resistance and learn how to optimize antimicrobial prescribing to improve individual patient care, reduce hospital cost, and slow the spread of antimicrobial resistance. It resulted to imparting knowledge to different pharmacists and health care providers by working together with the Department of Health in training new antimicrobial stewardship in government and private institution (DOH, 2018).

Programs Promoting Proper Antibiotic Use

In an attempt to manage antibiotic resistance at the national level, countries are implementing different policy approaches and guidelines to combat the spread of resistant bacteria. A commonly used strategy is control through restricted market access for medications such as antibiotics, meaning that citizens are not able to purchase antibiotics over the counter (OTC) without prescription. The results show that patients presented with information on antibiotics and drug resistance have more knowledge about these subjects than patients who do not receive the information and are more compliant in using antibiotic correctly (Haug, 2014).

The understanding of the health care providers in dealing with their patients in antibiotic therapy is vital to effective use of antibiotic. Furthermore, patients learn to associate recovery from illness with antibiotics, and expect the same treatment on subsequent office visits. Doctors seek to satisfy their patients and give the prescriptions. However, if patient demand decreases due to an increased understanding, doctor-prescribing practices should follow suit. It is significant because a bleak antibiotic future exists. Thus, promotion program for correct use of antibiotic is important (Wahls, 2017).

In the study of Lein (2018) entitled "Antibiotic Resistance: Implications of Hospital Practices for Public Health" the strategies to optimize antibiotic prescribing can be effective. The proper use of antibiotic gets the proper potency and strength of antibiotic which can result to total death of microorganisms for if there is no complete dosage intake the relapse of the patient to sudden bacterial growth is dangerous to the health of the patient.

According to DEGAM (2017) in the article entitled "Investing to deliver on the Objectives of the Global Action Plan on Antimicrobial" combating drug resistance is urgently needed. The return of economic and health investments in managing antimicrobial resistance will be large and are needed across several sectors to minimize the negative impact of antimicrobial resistance an effective and sustainable antimicrobial resistance response requires strong evidence that clarifies the consequences of antimicrobial resistance which may undermine important global development gains made over the last decade. A

convincing narrative need to show how building the antimicrobial resistance components into development programs can become a lever for averting negative impact of antimicrobial resistance.

According to Condez (2015), the effectiveness of any antibiotics and drugs rely on the right dosage and right drug. Thus, the Department of health is intensifying its information dissemination to the people on the importance of doctors' prescription on using antibiotic for their safety and welfare.

Awareness on Antibiotics Usage and Resistance

It is important to have awareness on the dangers of antibiotic use as shown on the answers of many of respondents who agreed on the need for knowing the different antibiotics to cure different diseases (96%). However, participants had different views about whether antibiotics were effective against coughs and colds, viruses, and bacteria. A large number of the respondents (83%) replied that antibiotics speed up the recovery from most coughs and colds. Many respondent agreed that antibiotics are effective against bacteria (90%) and about just less than half (47%) claimed that antibiotics are effective against viruses. These awareness level can be factors towards their decision on using antibiotic appropriately. The need for proper information dissemination to increase awareness is relevant to the people to be guided in their actions in taking drugs like antibiotic (Ayele, 2018).

Benefits of Correct Use of Antibiotics

Prevention of antibiotic resistance is a global challenge, requiring urgent attention for better effects to patient. Inefficient hospital infection control and hospital dissemination of antibiotic residues and antibiotic resistant bacteria contribute to the spread of antibiotic resistance. Thus, for more effective effects of antibiotic to help patient get well immediately it should be taken correctly with doctor's advice. If it is done properly patient will get well faster and control of infection is higher (Jones, 2014).

The evolution and modernization of technology helps medicines today helpful and beneficial to the patients because they cure many illness. of resistance therefore occurs naturally in bacteria when exposed to antibiotics. However, antibiotic misuse accelerates the process and multiple factors can contribute to its spread of infection. To attain higher benefits potential pathways by which antibiotic resistance may spread should be controlled. The extent of these pathways may differ depending on different bacteria, different types of resistance, and also various locations and environments. If people are aware of the good effects of proper dosage then the more that they will take the drug properly and the result faster and higher cure rate (Malone, 2017).

The WHO (2017) introduce the global action plan on antimicrobial resistance emphasizes the importance of using a 'One Health' approach for more effective impact to clients recovery. The 'One Health' concept considers human health, the health of animals and of the environment as one entity they are interconnected. In relation to antibiotic resistance, the 'One Health' approach is crucial because antibiotic resistance can spread between human, animals and the environment. The proper care and actions to prevent it can be helpful in having effective outcome of antibiotic treatment to patient.

According to Tayag (2016), the integration of the understanding of the profile characteristics of the people is essential in advocacy program of the

department of health. The most common aspect that affects the health education understanding is the educational attainment since the level of understanding of the individual is higher if they are educated compared to those with lower educational level.

Side Effects of Antibiotic Use

In the study of Schechner et. Al. (2013) entitled “Epidemiological interpretation of studies examining the effect of antibiotic usage on resistance” result showed drugs have many side effects thus, careful and correct intake is one way to ensure patients are safe during drug intake. The full intake of right dosage and right route is essential to control side effects. Often the drugs are harmful to the kidneys if not properly monitored. Additionally common side effects of antibiotic is the allergic reactions. Doctors should be notified if they are noted during intake of patients. Thus, people should be aware of the side effects of drugs before they use it.

Similarly, in the article of Archibald (2012) entitled “Principles of Infectious Diseases Epidemiology” it has enumerated different side effects of antibiotic use. The common effects are gastric irritations and loose bowel movements since the body adjust to the medications. Often the effect in the stomach of these drug is to irritate the lining thus, they are best taken with means for they have lesser side effects and higher efficiency. To avoid dangerous a side effects proper guidance by doctors and pharmacist is very important.

The National Antibiotic Guidelines (2017) mandated the proper use of antibiotic which should be guided by doctors. Therefore it should be taken under the doctor’s order and prescription to ensure that the right dosage and type of antibiotic is used in the patients. The proper utilization of drugs will help save the lives of patient but improper use may pose danger in the health of the person using it for this may result to full blown infection.

Adelaine and Margot (2015) highlighted in their study that the common problems of people today is information access to the use of antibiotic usage since in many developing countries there are no sufficient doctors that can provide free check up and prescribe the antibiotics they needed in their illness. And if they go to private doctors the payment is often expensive.

The WHO (2015) confirms that indeed the cultural beliefs of people affected their perceptions and practices in the use of medications like antibiotic often times the more traditional the tribe of the person is the more different their practices are in using medications. It added further, that people economic status that includes educational level are sources of variation in use of antibiotics also.

In the article posted by Dr. Brien O’ Niel (2017), the different identity or profile characteristics of patient have different reactions towards usage and effectiveness of antibiotic. Often in American people understand the significance of using doctors’ prescription and regardless of poor or rich educated or not people complies with the mandate of buying antibiotic under the prescription of the doctor which assures intake of this drug properly.

Katzung (2017) emphasized on her article that knowing many things about the proper use of antibiotic empowers the people and lessen the problems encountered in the use of antibiotic. The current situations in people who mis use antibiotic are drug resistance. Thus, the challenge of ensuring people have enough knowledge on antibiotic use is very important for effective utilization of the antibiotic drugs.

METHODS

The study utilized the quantitative - qualitative research design. The quantitative aspect was used in the descriptive design which is appropriate in describing the profile, awareness and effects of the DOH Antimicrobial Drug Resistance Program of the respondents using survey and questionnaire in data gathering. Furthermore, the correlational design was used in describing the significant relationship of the demographic profile in the awareness and effects of the DOH Antimicrobial Drug Resistance Program. On the other hand, the qualitative design was used during interview in exploring the problems encountered by the respondents.

Locale of the Study

The study was conducted in Barangay Kusiong, Datu Odin Sinsuat, Maguindanao. It is one of the main barangays in of Datu Odin Sinsuat, Maguindanao located in the coastal area with a total population of 1,499 based on 2016 census.

Respondents

The respondents of the study were the 35 individuals who are bonafide residents of Kusiong, Datu Odin Sinsuat, Maguindanao.

Sampling Technique

The study utilized the random sampling design. This is a probability sampling technique wherein each and everyone from the population will be given equal chances of being selected to participate in the survey basically those individual who are available during data gathering procedure will be selected (Creswell, 2018).

RESULTS AND DISCUSSIONS

Profile of the Respondents

The profile of the respondents includes the age, educational attainment, sex and tribe. These profile characteristics were included in the study to distinguish the respondents and support the result of the study.

Table 1
Percentage Distribution of Demographic Profile

Age	f	%
18 – 22 years old	9	25.7
23 – 25 years old	8	22.9
26 – 32 years old	9	25.7
33 – 42 years old	0	0.0
43 – 59 years old	9	25.7
Educational Attainment	f	%
Undergraduate	2	5.7
Elementary Level	11	31.4

Elementary Graduate	7	20.0
High School Level	9	25.7
High School Graduate	3	8.6
College Level	2	5.7
College Graduate	1	2.9
Sex	f	%
Female	19	54.3
Male	16	45.7
Tribe	f	%
Maguindanaon	2	5.7
Bisaya	11	31.4
Iranun	7	20.0
Teduray	9	25.7
Total	35	100.0

Table presents the demographic profile in terms of age, many (both with 25.7%) of the residents are the in age bracket of 18 – 22 years old, 26 – 32 years old and 43 – 59 years old while the rest are between ages 23 – 25 years old. Their mean age is 31.2 or 31 years old.

Many (31.4%) of the respondents have attained an elementary level of education followed by those have a high school level of education (25.7%) and elementary graduates (20%). Others are high school graduates (8.6%), undergraduates and at college level (both with 5.7%) and only a few are college graduates (2.9%).

Out of the 35 respondents, 19 or 54.3% are female while there are 16 or 45.7% who are male.

Many (31.4%) of the respondents came from the Bisaya tribe followed by those in the Teduray tribe (25.7%) and Iranun tribe (20%). The least came from the Maguindanaon tribe (5.7%).

In summary, the demographic profile of the respondents describes different characteristics of the respondents providing good support in the sources of data for exploring the awareness of the people towards antibiotic use.

According to the Department of Health (2018), the different groups of people have different practices towards antibiotic utilization. This is often affected by tribal affiliations and educational level wherein the people practices and beliefs towards medicine use affects their behavior towards it.

Level of Awareness of the Respondents on the DOH Antimicrobial Drug Resistance Program

The level of awareness of the respondents on the DOH Antimicrobial Drug Resistance Program were subdivided into 2 domains in terms of the proper use of antibiotics and the side effects of antibiotics. These were included in the study to determine the perception of the respondents on the proper use of antibiotics in order to avoid drug resistance and complications.

Table 2
Level of Awareness of the Respondents on the DOH Antimicrobial Drug Resistance Program in terms of Proper Use of Antibiotics

Proper Use of Antibiotics	Mean	Interpretation
1. It should be taken with doctors prescription.	1.89	Moderately Aware

2. It should be taken for complete 7 days.	1.89	Moderately Aware
3. It should be taken after meals.	1.97	Moderately Aware
4. It should be taken with correct dosage or amount.	2.03	Moderately Aware
5. It should be taken on correct time.	2.00	Moderately Aware
6. It should be taken with correct preparations.	1.94	Moderately Aware
7. Use generic names when buying antibiotic drugs.	1.74	Moderately Aware
8. Check expiration date of drugs.	1.94	Moderately Aware
9. Do not take drugs without names or wrapper.	1.97	Moderately Aware
10. Do not use others prescription to buy it.	1.91	Moderately Aware
Weighted Mean	1.93	Moderately Aware

Legend:	3.50 – 4.00	very Much Aware
	2.50 – 3.49	Aware
	1.50 – 2.49	Moderately Aware
	1.00 - 1.49	Not Aware

Table 2 displays the level of awareness of the respondents on the DOH Antimicrobial Drug Resistance Program in terms of the proper use of antibiotics. Most of the respondents are moderately aware that antibiotics should be taken with correct dosage or amount (with highest mean at 2.03), on the correct time (mean of 2.00), and after meals as well as do not take drugs without names or wrapper (both with a mean of 1.97). They are also moderately aware that they should check expiration date of drugs and it should be taken with correct preparations (both with a mean of 1.94), do not also use others prescription to buy it (mean of 1.91), and that they are least moderately aware of antibiotics requiring doctors prescription and be taken complete 7 days (mean of 1.89) as well as using generic names when buying antibiotic drugs (lowest mean at 1.74).

The result denotes that the respondents lacks knowledge about the proper use of antibiotics which shows people are not aware of the importance of using antibiotics and any other drugs properly to maximize its effectiveness.

The National Antibiotic Guidelines (2017) mandated the proper use of antibiotic which should be guided by doctors. There fore it should be taken under the doctors order and prescription to ensure that the right dosage and type of antibiotic is used in the patients.

Table 3
Level of Awareness of the Respondents on the DOH Antimicrobial Drug Resistance Program in terms of Side Effects of Antibiotics

Side Effects of Antibiotics	Mean	Interpretation
1. It causes allergy.	2.03	Moderately Aware
2. It causes gastric irritation.	1.89	Moderately Aware
3. It causes loose bowel movement.	1.66	Moderately Aware
4. It causes rashes.	1.80	Moderately Aware
5. It causes headache.	1.89	Moderately Aware
6. It changes the color of my urine.	1.80	Moderately Aware
7. It causes difficulty in sleeping.	1.77	Moderately Aware
8. It causes complication to kidneys.	1.89	Moderately Aware
9. It causes edema (manas)	1.77	Moderately Aware
10. It causes increase heart rate.	1.63	Moderately Aware
Weighted Mean	1.81	Moderately Aware
Legend:	3.50 – 4.00	very Much Aware
	2.50 – 3.49	Aware
	1.50 – 2.49	Moderately Aware
	1.00 - 1.49	Not Aware

Table 3 shows the level of awareness of the respondents on the DOH Antimicrobial Drug Resistance Program in terms of the side effects of antibiotics. Most of the respondents are moderately aware that antibiotics can cause allergy (highest mean at 2.03), gastric irritation, headache as well as complication to the kidneys (mean of 1.89), rashes and that it changes the color of urine (mean of 1.80), causes difficulty in sleeping and edema (mean of 1.77). The least that they are moderately aware of the side effects of antibiotics is that it can cause loose bowel movement (mean of 1.66) and increase heart rate (mean of 1.63).

The result implies that respondents have not fully understood that drugs often have side effects. This is alarming because this may lead to misuse of antibiotics since they do not now it has side effects.

In the study of Schechner et al (2013) entitled “Epidemiological interpretation of studies examining the effect of antibiotic usage on resistance” result showed drugs have many side effects thus, careful and correct intake is one way to ensure patients are safe during drug intake. The full intake of right dosage and right route is essential to control side effects. Often the drugs are harmful to the kidneys if not properly monitored. Additionally common side effects of antibiotic is the allergic reactions. Doctors should be notified if they are noted

during intake of patients. Thus, people should be aware of the side effects of drugs before they use it.

Level of Effectiveness of the DOH Antimicrobial Resistance Program

The level of effectiveness of the DOH Antimicrobial Drug Resistance Program was also subdivided into 2 domains namely in terms of the benefits in the correct use of antibiotics and the information education about correct use of antibiotics. These were included in the study to assess the efficiency of the program in regards to the benefits of using it correctly and their information dissemination of the program.

Table 4
Level of Effectiveness in terms of Benefits in the Correct Use of Antibiotics

Benefits of Correct Antibiotic Usage	Mean	Interpretation
1. It heals the infection.	2.83	Effective
2. It decreases swelling.	2.71	Effective
3. It decreases pain.	2.86	Effective
4. It eliminates my fever.	3.63	Very Much Effective
5. It cures my illness.	2.74	Effective
6. It prevents spread of infection.	2.54	Effective
7. It prevents complications.	2.74	Effective
8. It cures sepsis	2.89	Effective
9. It is effective since it was used appropriately.	2.94	Effective
10. It increases my resistance to illness.	2.91	Effective
Weighted Mean	2.88	Effective
Legend:	3.50 – 4.00	very Much Effective
	2.50 – 3.49	Effective
	1.50 – 2.49	Moderately Effective
	1.00 - 1.49	Not Effective

Table 4 exposes the effectiveness of the DOH Antimicrobial Drug Resistance Program in terms of the benefits in the correct use of antibiotics. Through the correct use of antibiotics, the residents found it was very much effective in eliminating their fever (highest mean at 3.63). It is effective since it was used appropriately (mean of 2.94), increases their resistance to illness (mean of 2.91), cures sepsis (mean 2.89), decreases the pain (mean of 2.86), heals the infection (mean of 2.83), cures their illness and prevents complications (both with a mean of 2.74), and the least benefits that they found effective are that antibiotics decreases swelling (mean of 2.71) and prevents spread of infection (mean of 2.54). The result signifies the respondents have experienced the many benefits of taking completely antibiotic. This signifies they are obedient in taking the antibiotics correctly for more effective result.

Doctors recommend that for more effective effects of antibiotic to help patient get well immediately it should be taken correctly and completely with doctor's advice. If it is done properly patient will get well faster and control of infection is higher (Jones, 2014).

Table 5
Level of Effectiveness in terms of Information Education
about Correct Use of Antibiotics

Information Education about Correct Antibiotic Usage	Mean	Interpretation
1. Watched about it in the television	2.77	Effective
2. Read in the internet if it is harmful if not taken properly.	2.29	Moderately Effective
3. Informed by the midwife to take it completely.	2.77	Effective
4. Instructed by the doctor not miss any dose.	2.86	Effective
5. Heard from the radio that self-medicating is wrong	2.71	Effective
6. Learned to be careful in taking antibiotics.	2.86	Effective
7. Read in the posters the dangers on misuse of antibiotic.	2.91	Effective
8. Learned from my RHU that medicines should be taken correctly.	2.86	Effective
9. Advised by pharmacist not to buy antibiotics without prescriptions.	2.91	Effective
10. The DOH announces buying antibiotics without prescription is not allowed	2.83	Effective
Weighted Mean	2.78	Effective
Legend:	3.50 – 4.00	very Much Effective
	2.50 – 3.49	Effective
	1.50 – 2.49	Moderately Effective
	1.00 - 1.49	Not Effective

Table 5 tells about the effectiveness of the DOH Antimicrobial Drug Resistance Program in terms of the information education about correct use of antibiotics. In regards to the information education done by the program about correct use of antibiotics, it is effective when the residents read in the posters the dangers on misuse of antibiotic as well as when it advised by a pharmacist not to buy antibiotics without prescriptions (both with the highest mean at 2.91), it is also effective when instructed by the doctor not to miss any dose, to be careful in taking antibiotics and having learned from their RHU that medicines should be taken correctly (all with a mean of 2.86), also when the DOH announces buying antibiotics without prescription is not allowed (mean of 2.83). The least among the items of it being effective is when hearing from the radio that self-medicating is wrong (mean of 2.71). On the other hand, the participants perceive it as moderately effective when information about proper of use of antibiotics is read in the internet (lowest mean at 2.29).

This results manifest that the respondents understand that the antibiotic usage should be taken properly for more effective result in curing their illness. The answers also expressed that there is an effective information about the proper use of antibiotic so that people will be aware of its effects and benefits.

These awareness level can be factors towards their decision on using antibiotic appropriately. The need for proper information dissemination to increase awareness is relevant to the people to be guided in their actions in taking drugs like antibiotic (Ayele, 2018).

Significant Relationship between the Demographic Profile of the Respondents and the Overall Awareness and Effects of the DOH Antimicrobial Drug Resistance Program

Table 6 presents the significant relationship between the demographic profile of the respondents and the overall awareness and effects of the DOH Antimicrobial Drug Resistance Program. (.05)

Table 6
Significant Relationship between the Demographic Profile of the Respondents and the Overall Awareness and Effects of the DOH Antimicrobial Drug Resistance Program

Awareness and Profile in terms of:	r-value	Description	p-value	Decision	Significance
Age	-.103	Negligible Correlation	.556	Accept Ho	Not Significant
Educational Attainment	.588	Moderate Correlation	.000	Reject Ho,	Significant
Sex	-.448	Moderate Correlation	.007	Reject Ho,	Significant
Tribe	-.055	Negligible Correlation	.753	Accept Ho	Not Significant
Overall	.198	Negligible Correlation	.239	Accept Ho	Not Significant

Effectiveness and Profile in terms of:	r-value	Description	p-value	Decision	Significance
Age	.063	Negligible Correlation	.718	Accept Ho	Not Significant
Educational Attainment	.417	Moderate Correlation	.013	Reject Ho,	Significant
Sex	-.169	Negligible Correlation	.332	Accept Ho	Not Significant
Tribe	.072	Negligible Correlation	.682	Accept Ho	Not Significant
Overall	.180	Negligible Correlation	.436	Accept Ho	Not Significant

Value of r	Interpretation
±.01 – ±.19	Negligible Correlation
±.20 – ±.39	Low Correlation
±.40 – ±.69	Moderate Correlation
±.70 – ±.89	High Correlation
±.90 – ±.99	Very High Correlation

To determine the significant relationship between the demographic profile of the respondents in terms of age, educational attainment, sex and tribe and the overall awareness and effects of the DOH Antimicrobial Drug Resistance Program, Pearson Product Moment Correlation Coefficient at .05 level of significance was used.

The overall r-value between the overall awareness of the respondents on the DOH Antimicrobial Drug Resistance Program and profile of the respondents is .198 showing negligible correlation with a p-value of .239 and between the overall effectiveness of the DOH Antimicrobial Drug Resistance Program and profile of the respondents is .180 showing negligible correlation with a p-value of .436. Since the p-values are less than .05 between overall awareness of the respondents on the DOH Antimicrobial Drug Resistance Program and profile of the respondents in terms of educational attainment and sex as well as between overall effectiveness of the DOH Antimicrobial Drug Resistance Program and profile of the respondents in terms of educational attainment, then the null hypothesis that there is no significant relationship between the demographic profile of the respondents and the overall awareness and effectiveness of the DOH Antimicrobial Drug Resistance Program is rejected and that the alternative hypothesis that there is a significant relationship between demographic profile of the respondents and the overall awareness and effectiveness of the DOH Antimicrobial Drug Resistance Program is accepted.

Lippincott (2016), explained that medication effects is affected by many factors depending on the case and characteristics of the person.

Therefore, there is a significant relationship between profile of the respondents in terms of educational attainment and sex and the overall awareness of the respondents on DOH Antimicrobial Drug Resistance Program. There is also a significant relationship between profile of the respondents in terms of educational attainment and the overall effectiveness of the DOH Antimicrobial Drug Resistance Program.

The result signifies that the educational attainment and sex have contributed in the overall effective utilization of people on correct antibiotic used as advocated in the [program of the Department of Health.

According to Tayag (2016), the integration of the understanding of the profile characteristics of the people is essential in advocacy program of the department of health. The most common aspect that affects the health education understanding is the educational attainment since the level of understanding of the individual is higher if they are educated compared to those with lower educational level.

Problems Encountered

The problems encountered were gathered through interview. According to the common answers of the respondents often the lack of sufficient sources of information on the usage of drugs including its effect and side effects are the problem of the people. They also expressed problem on buying antibiotic without doctors' prescriptions. Some of the dialogues in the interview are presented in the succeeding page:

All of the respondents sadly expressed:

“Mahirap po talaga bumili ng antibiotic kay pag walang reseta hindi ka makabili.” (It is difficult to buy antibiotics because you cannot buy it without prescriptions from the doctor).

Many of the respondents claimed:

“Wala po akong pagkukunan ng impormasyon sa mga epekto at masamang epekto ng gamut kaya mahirap talaga.” (It is difficult because

I don not have sources of information on the effects and side effects of drugs).

The findings describe the difficulties of the people in buying and in accessing information regarding antibiotic use because it should be provided appropriately by doctors for proper usage guidelines.

Adelaine and Margot (2015) highlighted in their study that the common problems of people today is information access to the use of antibiotic usage since in many developing countries there are no sufficient doctors who can provide free check up and prescribe the antibiotics they needed in their illness. And if they go to private doctors the payment is often expensive.

Summary of the Study

Antibiotic drugs are very important in curing patient's illness. However, the improper use of this drug is also detrimental to people's health. This study aimed to assess the awareness and effects of the DOH Antimicrobial Drug Resistance Program, in Barangay Kusiong, DOS Maguindanao. This study utilized the quantitative and qualitative research design. It selected 35 individuals who are bonafide residents of Kusiong, Datu Odin Sinsuat, Maguindanao. This study employed simple random sampling technique. Survey questionnaire and guide questions were used to gather data. The researcher used the frequency and percentage distribution for the profile, mean and standard deviation for the awareness of the respondents and effectiveness of the DOH Antimicrobial Drug Resistance Program and Pearson-r was utilized to interpret the relationship between the demographic profile of the respondents and the overall awareness and effectiveness of the DOH Antimicrobial Drug Resistance Program.

Major Findings of the Study

Based on the data presented, analyzed and interpreted, the following are the major findings of the study:

1. The demographic profile of the respondents, in terms of age both of the residents are the in age bracket of 18 – 22 years old, 26 – 32 years old and 43 – 59 years old, many of them have attained an elementary level of education, female, and from the Bisaya tribe.
2. With regards to the level of awareness of the respondents on the DOH Antimicrobial Drug Resistance Program in terms of the proper use of antibiotics, most of the respondents are moderately aware that antibiotics should be taken with correct dosage or amount, on the correct time, and after meals as well as do not take drugs without names or wrapper. They are also moderately aware that they should check expiration date of drugs and it should be taken with correct preparations, do not also use others prescription to buy it, and that they are least moderately aware of antibiotics requiring doctors prescription and be taken complete 7 days as well as using generic names when buying antibiotic drugs.

In terms of the side effects of antibiotics, most of the respondents are moderately aware that antibiotics can cause allergy, gastric irritation, headache as well as complication to the kidneys, rashes and that it changes the color of urine, causes difficulty in sleeping and edema. The least that they are moderately aware of the side effects of antibiotics is that it can cause loose bowel movement and increase heart rate.

3. With regards to the effectiveness of the DOH Antimicrobial Drug Resistance Program in terms of the benefits in the correct use of antibiotics, the residents found it was very much effective in eliminating their fever. It is effective if used appropriately, because it increases their resistance to illness, cures sepsis, decreases the pain, heals the infection, cures their illness and prevents complications, and the least benefits that they found effective are that antibiotics decreases swelling and prevents spread of infection

In regards to the information education done by the program about correct use of antibiotics, is effective when the residents read in the posters the dangers on misuse of antibiotic as well as when it advised by a pharmacist not to buy antibiotics without prescriptions. It is also effective when instructed by the doctor not to miss any dose, to be careful in taking antibiotics and having learned from their RHU that medicines should be taken correctly, also when the DOH announces buying antibiotics without prescription is not allowed. At least it is also effective when respondents watched about it in the television and being informed by the midwife to take it completely. On the other hand, the participants perceive it as moderately effective when information about proper use of antibiotics is read in the internet.

4. There is a significant relationship between profile of the respondents in terms of educational attainment and sex and the overall awareness of the respondents on DOH Antimicrobial Drug Resistance Program. There is also a significant relationship between profile of the respondents in terms of educational attainment and the overall effectiveness of the DOH Antimicrobial Drug Resistance Program.
5. The problems encountered by the respondent on the implementation of DOH Antimicrobial Resistance Program are lack of information sources and difficulties of buying antibiotics without doctors' prescriptions.

Conclusion

Based on the findings of the study, the researchers are concluding that majority of the respondents have very low knowledge of the DOH Antimicrobial Drug Resistance Program since they are only moderately aware of the proper usage of antibiotics and its side effects. This indicates a need for improvement in terms of information dissemination and education to increase their knowledge and make them very aware of the DOH Antimicrobial Drug Resistance Program. When it comes to the effectiveness of the program, they were proven to be effective in terms of benefits of proper usage of antibiotics and information education about correct use of antibiotics. Even so, there is still room for improvement especially in terms of information education since many of the respondents said that reading about the program on the internet is only moderately effective. The study also revealed that educational attainment plays a significant part in the relationship between demographic profile and the overall awareness and effectiveness of the DOH Antimicrobial Drug Resistance Program. This tells us that having majority of them only attaining an elementary level of education resulted in having most of them as only being moderately aware or with very low knowledge of the said program.

Recommendations

In the light of the findings and conclusion of the study the following recommendations are formulated.

1. The Rural Health Units to intensify information dissemination in the clients on how to use the antibiotics including its effects and side effects.
2. The drug companies must intensify the health education especially on the generic names of antibiotic drugs for respondents to gain knowledge and have options when buying prescription that only have brand names.
3. The health workers should continue to instruct and advise patients on the proper usage of antibiotic especially those that needed doctor's prescription before buying and that they should be taken completely for 7 days.
4. The Department of Health should provide sufficient information through posters and tri media about the utilization of antibiotic said program in a way that is relatable to viewers for them to understand its message.
5. The Department of Health should conduct seminars on the drug utilization guidelines and proper antibiotic use.
6. The midwifery schools and students must advocate to their clients on the correct usage of antibiotic for better effectiveness of the drug.

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