

Rheumatic Heart Disease Management: Patients' Experiences, Health Practices, and Role Performance

REGINA R. TOLENTINO

<http://orcid.org/0000-0003-2546-0276>

reggiert811@gmail.com

Notre Dame University

Cotabato City, Philippines

VIRGINIA S. MARGALLO

Notre Dame University

Cotabato City, Philippines

Originality: 100% • Grammar Check: 100% • Plagiarism: 0%



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

ABSTRACT

Rheumatic Heart Disease (RHD) continues to be a major health hazard in most developing countries as well as sporadically in developed economies. This study aimed to determine the drug regimen therapy of the rheumatic heart disease patients and the effects of the illness physically, emotionally, and socially. This qualitative and quantitative study documented the drug regimen therapy management of twenty seven (27) patients among the eighty-two (82) patients currently receiving the drug regimen for Rheumatic Heart Disease at the Out-Patient Department (OPD) of Cotabato Regional and Medical Center (CRMC) through interview, observation, self-made questionnaire and focus group discussion. The study found out that RHD patients, who were mostly housewives, feel strong and healthy when complying the date of Benzathine penicillin and experienced heart palpitation if unable to come on their visit on

the 21st or 28th of the month. The effect of RHD physically is feeling of fatigue on the emotional aspect, anxious in the social aspect and avoid activities. The current role performance mostly are housewives. On health services received at OPD CRMC mostly, they received an injection of Benzathine Penicillin. The majority have a monthly check-up as their priority in their health practice.

Keywords — Health Science, Rheumatic Heart Disease, Quantitative-qualitative design, Cotabato Regional, and Medical Center, Cotabato City, Philippines

INTRODUCTION

Rheumatic heart disease is a major burden in developing countries where it causes most of the cardiovascular morbidity and mortality in young people and is, therefore, a relevant public health problem. Over 15 million people around the world suffer from the condition which kills hundreds of thousands of people a year and is the next common acquired heart disease found among children and young people (Seckeler and Hoke, 2011). The evidence that increases adherence prevent acute rheumatic fever recurrence and death should be a powerful motivational tool to encourage health professional and client to maximize adherence as pointed out by De Dassel, De Klerk, Carapetis and Ralph (2018). RHD continue to be a major cause of disease burden among children, adolescents, and young adult in a low-income country and even in high-income countries with socio-economic inequality. The socio-economic state, access, and quality of health care services are important determinants of the burden of RHD as underscored by Negi, Sondhi, Asotra, Mahajan, and Metha (2019).

Nordqvist (2014) stated that the disease starts with a sore throat that develops into a rheumatic fever; the body's system starts attacking the heart valves, brain, joints, and skin. Although other tissues recover, it is the heart where permanent damage occurs. Treatment of acute rheumatic heart fever includes antibiotics to treat the strep. Infection and additional medications to ease the inflammation of the heart and other symptoms. A long term drug prophylaxis should be given to all children and adult, who suffered an attack of RHD, for protection against streptococcal infection. The duration of prophylaxis differs from case to case, as the incidence of the disease as age advance. This drug prophylaxis may be given until the child reaches adult age or for five years after the last attack of RHD. Once the prophylaxis is withdrawn, great vigilance is required, and the child or adult

should take proper treatment for sore throat. However, drug prophylaxis may be required almost forever or lifelong, especially in cases which exhibit a permanent sign of RHD (Guptha, 2011). With the failure to get RHD treatment, a sufferer may further face the risk of congestive heart failure, abnormal heart rhythm, or stroke. The pumping of blood becomes less efficient and the heart has to work harder and faster due to the damaged heart valve (Carrie, 2010).

According to the Philippine Heart Association (2012) Rheumatic, Heart Disease is one of the top-ranking causes of mortality and morbidity in the Philippines when it pertains to acquire the cardiovascular disease, especially among school children ages 5-15 years old.

In Cotabato City, where most patients are treated at Cotabato Regional and Medical center, there are about eighty-two (82) patients who are currently undergoing treatment. Referrals had been made by other caregivers to seek consultation at CRMC.

The state must provide free health services as well as free medications to all clients regardless of the economic status to ensure health wellness. It is on this premise that the study is pursued to know the drug regimen therapy of the rheumatic heart disease patients and the effects of the illness physically, emotionally and socially—also, the experiences of the patients during their compliance and non-compliance since medications for RHD are not always available.

FRAMEWORK

The study is linked to the theory of Nola J. Pender's Health Promotion Model. Health-promoting behavior should result to improve health, enhance functional ability, and better quality of life at all stages of development. In this study, the different preventive measures that the participants use will determine their health-promoting behavior and the client's level of well-being with regards to compliance of treatment and adequate antibiotic regimen.

OBJECTIVES OF THE STUDY

This study aimed to (1) identify the demographic profile of participants in terms of age, sex, civil status, and occupation, family income per month and, day of the visit to the hospital, (2) describe the experiences on the drug regimen therapy in terms of compliance and non-compliance, (3) determine the effects of

the Rheumatic Heart Disease to the patients physically, emotionally, and socially, (4) identify the current role performance of the patients, (5) Find out the health services received by the patients from the Cotabato Regional and Medical center, and (6) Identify the other health practices of the patients.

METHODOLOGY

Research Design

This study utilized qualitative and quantitative design through an interview, observation, available records on the chart, and self-made questionnaire. The study aimed to determine the drug regimen therapy of Rheumatic Heart Disease patients.

Research Site

The study was conducted at the Injection Room, first floor of the Out-Patient Department of Cotabato Regional and Medical center, Sinsuat Avenue, Cotabato City.

Participants

The respondents of the study are the Rheumatic Heart Disease patients who visited and availed the services of the Out-Patient Department of Cotabato Regional and Medical Center, Cotabato City as of October 7, 2016, to November 17, 2016.

Sampling Technique

The researchers chose twenty-seven (27) patients or thirty-four percent (34%) among the eighty-two (82) patients currently receiving the drug regimen for Rheumatic Heart Disease. Five patients with an age bracket of 5 to 11 years old. Five patients with an age bracket of 19 to 25 years old, five patients with an age bracket of 26 to 32 years old, five patients with an age bracket of 33 to 39 years old and two patients from an age bracket of 40 years old and above Rheumatic Heart Disease patients of the Out-Patient Department of Cotabato Regional and Medical Center during their monthly visit for injection. This is the representation of different ages who are currently receiving the drug regimen of Rheumatic Heart Disease patients.

Out of twenty-seven (27) respondents, fifteen (15) are females and twelve (12) are males, five (5) are categorized as children, thirteen (13) are single,

and nine (9) are married. With regards to occupation, thirteen (13) belong to children-students, three (3) are jobless, five (5) are housewives, four (4) are self-employed, one (1) is a farmer and one (1) is a teacher. Twenty-two (22) have a family income of P5, 000.00-P10, 000.00 per month; two (2) has P11, 000.00-P15, 000.00; one (1) has P21, 000.00-P30, 000.00 and two (2) has P31, 000.00 and above. Out of the 27 respondents, 11 are expected to visit the hospital for injection on the 21st day of the month and 16 respondents are expected to visit on the 28th day of the month for assessment and injection.

Instrumentation

The instrument used in this study is a self-made questionnaire distributed by the researchers. It is a four (4) part question. Question number one (1) is about the profile which includes age, sex, civil status, occupation, family income per month and day of visit to the hospital, question number two (2) is about the experience on the drug regimen therapy in terms of compliance and non-compliance, question number three (3) is about the effects of Rheumatic Heart Disease to the patients physically, emotionally and socially, question number four (4) is about the current role performance of the patients, question number six (6) is the other health practices of the patients. The questionnaire was content-validated by three experts and tried out the reliability of the instrument and pilot tested before being used to the patients. The 15 patients were also rheumatic heart disease patients who come to Cotabato Regional and Medical Center Outpatient Department on the 21st and 28th day of the month. Dr. Myrna Tubigan and Dr. Elyn Dimagiba rated strongly agree with the criteria given. These criteria were the readability level, comprehensive, vocabulary and sufficiency of items. Dr. Alfonso Gonzales Jr. rated strongly agreed on the vocabulary and agreed on the readability level, comprehension, and sufficiency of items.

Data Gathering Procedure

A letter was sent to the Chief of Hospital of Cotabato Regional and Medical Center last September 27, 2016, asking to allow the observation and interview to Rheumatic Heart Disease patients of the Out-Patient Department. After the approval of the Chief of Hospital, a letter was sent to the Research Ethics Committee last September 2016 for approval after series of evaluation form has been filled up with corresponding documentation accomplished and submitted as required by the Ethics committee. After the approval of the Ethics committee, a letter was sent to the Supervisor of the Out-Patient Department to allow the researchers to conduct the study.

A meeting with the 27 patients was scheduled to ask permission, explained the research study, its confidentiality, and informed consent. Observation of some physical manifestation of the patients was analyzed and written for final output. Focus group discussion was utilized selecting ten (10) patients who are not included in the twenty-seven (27) selected patients. Informed consent was also administered and explained thoroughly.

Focus Group Guide Questions

1. What is your idea about RHD and how are you able to acquire the disease?
2. Can you recall what happened to you before you sought consultation and diagnosed with RHD?
3. What do you do now? Are you studying or working? Can you tell us the disruptions in your activities?
4. Why did you choose CRMC as your health provider?
5. What are the reasons why you fail to come at OPD CRMC on the 21st or 28th of the month?
6. What do you feel after you have been injected with Benzathine Penicillin?
7. Do you encounter problems during non-availability of Benzathine Penicillin?

RESULTS AND DISCUSSION

Rheumatic Heart Disease patients who avail the services of Cotabato Regional and Medical Center at the Out-Patient Department come from within and outside Cotabato City.

Patients with complaints of simple sore throat, fever, pain during swallowing seek consultation and after the assessment of pediatrician and internist are advised to have laboratory workout. These are supported by Seckeler and Hoke (2011) and the (World Heart Foundation 2013) that Rheumatic heart disease is a streptococcal throat infection (strep throat) with symptoms that include sudden onset of a sore throat (especially with painful swallowing) fever and swollen glands. It is usually a delayed effect of a simple sore throat or throat infection caused by Group A streptococcus. The disease is more prevalent in school children, younger people, teenager, young adult. It can be devastating but preventable.

Rheumatic Heart Disease patients after careful assessment of doctors are advised to come at OPD CRMC on the 21st or 28th of the month for a monthly checkup and injection of Benzathine Penicillin with a dose of 1.2 million international units to be injected intragluteally after negative skin test.

During compliance with the drug regimen, 18 out of the 27 respondents feel strong and healthy. On the non-compliance, 15 respondents feel heart palpitation. As pointed out by Tole (2015), patients who are compliant in one situation may feel strong with a healthy body and this may not be so in another. This positive influence on one individual might also have a negative on another and non – compliance may be a cause for hospitalization and readmission especially to adults. The Heart and Stroke Foundation (2011), also stated that symptoms include heart palpitation and thumping sensation of the chest.

On the effects of RHD physically to the individual patient, 20 out of 27 experienced fatigue. Myint, Aung, Win, Htut, Ralph, Cooper, and Hanson (2015) emphasized that the disease affects the connective tissue of the body and physically patients have weakness and fatigue.

On the emotional aspect, 21 patients are having anxiety about their conditions. As pointed out by Brunner (2010), caregivers need to assess the patient's psychological status and adherence to the management plan. The patients may experience anxiety and fear during treatment.

On the social aspects, they avoided and became selective on activities. These are confirmed by Talley and O'Connor (2013) that in some instances, patients may avoid activities in a school setting and even in their work. Others may be reluctant to join social activities in their community or even in their homes. Some have different perceptions in themselves; thus, they become selective in their activities.

Most of the patients are housewives (7 out of 27) and find time to have a monthly check-up for them to be prepared physically, on their daily chores for their families.

On health services received from OPD CRMC, there are 20 out of 27 Rheumatic Heart Disease patients had to avail the injections of Benzathine Penicillin. As stated by Gerber et al. (2009) the primary prevention of rheumatic heart disease is accomplished by proper identification and adequate antibiotic treatment. Injectable Benzathine Penicillin is the treatment of choice, because it is cost-effective, has a narrow spectrum of activity, and has a long-standing proven efficacy. The individual who has had an attack of rheumatic heart fever is a very high risk of developing recurrences and needs continuous antimicrobial prophylaxis to prevent recurrences.

On the health practices of rheumatic heart disease patients, to help them on their current disease, 20 patients have monthly check-up whether on the 21st or 28th of the month. As pointed out by De Dassel, De Klerk, Carapetis and Ralph (2018), adherence to regimen schedule prevent acute rheumatic fever recurrence and death.

CONCLUSIONS

Based on the findings of the study, the Rheumatic Heart Disease patients of Cotabato Regional Medical Center, the Out-Patient Department experience to be strong and healthy when complying for the scheduled date of injection and feel palpitation of the heart when not complying with the drug regimen. Physically, they have fatigability, on the emotional aspect they become anxious, socially they select and avoid activities. Most of them are pupils and students and receive injections as health service rendered by Cotabato Regional and Medical Center. The health practice they do is to have a monthly check-up religiously on the 28th day of the month.

TRANSLATIONAL RESEARCH

Based on the findings, an awareness campaign is of high regard to all health practitioners. Information-dissemination via radio or TV to reach remote places or by giving pamphlet through the RHD patients and family, or barangay health education campaign or even to use posters in each community. Moreover, it is highly recommended that CRMC must closely monitor all RHD patients by ensuring strict compliance on the treatment. It is also suggested that the DOH must ensure availability and easy accessibility on the treatment considering CRMC has always Internist to assess patients prior to injection of Benzathine Penicillin. It is best to consider the financial status of the majority of the patients; therefore, regularly checking of penicillin vials must be sustained.

LITERATURE CITED

Armstrong, C. (2010). AHA guidelines on prevention of rheumatic fever and diagnosis and treatment of acute streptococcal pharyngitis. *American Family Physician*, 81(3), 346-+. Retrieved from <https://bit.ly/2Js6Egw>

- de Dassel, J. L., de Klerk, N., Carapetis, J. R., & Ralph, A. P. (2018). How many doses make a difference? An analysis of secondary prevention of rheumatic fever and rheumatic heart disease. *Journal of the American Heart Association*, 7(24), e010223. Retrieved from <https://www.ahajournals.org/doi/10.1161/JAHA.118.009308>
- Gerber, M. A., Baltimore, R. S., Eaton, C. B., Gewitz, M., Rowley, A. H., Shulman, S. T., & Taubert, K. A. (2009). Prevention of rheumatic fever and diagnosis and treatment of acute Streptococcal pharyngitis: a scientific statement from the American Heart Association Rheumatic Fever, Endocarditis, and Kawasaki Disease Committee of the Council on Cardiovascular Disease in the Young, the Interdisciplinary Council on Functional Genomics and Translational Biology, and the Interdisciplinary Council on Quality of Care and Outcomes Research: endorsed by the American Academy of Pediatrics. *Circulation*, 119(11), 1541-1551. Retrieved from <https://doi.org/10.1161/CIRCULATIONAHA.109.191959>
- Guptha (2011). Antibiotic regimen for secondary prophylaxis of acute rheumatic fever. Published online 2011 Feb 22. doi: 10.2147/CLEP. Retrieved on July 2017 from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3046187/>
- Heart and Stroke Foundation (2011). Retrieved on June 2016 from <https://www.heartandstroke.ca/heart/conditions/rheumatic-heart-disease>
- Myint, N. P. S. T., Aung, N. M., Win, M. S., Htut, T. Y., Ralph, A. P., Cooper, D. A., ... & Hanson, J. (2018). The clinical characteristics of adults with rheumatic heart disease in Yangon, Myanmar: An observational study. *PloS one*, 13(2), e0192880. Retrieved from <https://doi.org/10.1371/journal.pone.0192880>
- Negi, P. C., Sondhi, S., Asotra, S., Mahajan, K., & Mehta, A. (2019). Current status of rheumatic heart disease in India. *Indian heart journal*. Retrieved from <https://doi.org/10.1016/j.ihj.2018.12.007>
- Nordqvist, C. (2014). Strep throat, Causes, Diagnosis, and treatment. *Medical News Today*. Retrieved on April 2016 from <https://www.medicalnewstoday.com/articles/155412.php>

- Pender, N. (1992). Theoretical Foundation of Nursing. Retrieved on June 22, 2016, from <https://nursingtheories.weebly.com/nola-pender.html>
- Philippine Heart Association (2012). What is Rheumatic Heart Disease? Retrieved on July 16, 2017, from <http://philfoundrfrhd.org>
- Seckeler, M. D., & Hoke, T. R. (2011). The worldwide epidemiology of acute rheumatic fever and rheumatic heart disease. *Clinical epidemiology*, 3, 67. Retrieved on July 15, 2017, from doi: 10.2147/CLEPS12977
- Talley, N. J., & O'Connor, S. (2013). *Clinical examination: a systematic guide to physical diagnosis*. Elsevier Health Sciences. Retrieved from <https://bit.ly/2xFm6iJ>
- Tole, S. (2015). *Assessment of Overall Level of Compliance Self Care and Its Associate Factors to Treatment among Heart Failure Patients in Adult Emrgency Departement and Cardiac Referal Clinic at Tikur Anbesa Specialized Hospital Addis Ababa, Ethiopia (Doctoral dissertation, Addis Ababa University)*. Retrieved from <https://bit.ly/30sps4J>