A STUDY TO ASSESS THE LEVEL OF KNOWLEDGE ON ANTIMICROBIAL STEWARDSHIP PROGRAMME AMONG HEALTH CARE PROVIDERS AT SELECTED HOSPITAL PERINTHALMANNA, WITH A VIEW TO DEVELOP AN INFORMATION BOOKLET. AFFILIATION DETAILS

Amritha P[1], Anjana V[2], Anju KP[3], Aparna V[4],Shilpa S[5]

[1] [2] [3] [4] 3rd year BSc Nursing Students, Al Shifa College of Nursing, [5]Assistant Professor, Department of Medical Surgical Nursing, Al Shifa College of Nursing, Angadippuram.

ABSTRACT

The present study entitled "A study to assess the level of knowledge on Antimicrobial Stewardship Programme among health care providers at selected hospital, Perinthalmanna, with a view to develop an information booklet". **OBJECTIVES OF THE STUDY:** Assess the level of knowledge on antimicrobial stewardship programme among health care providers .find out the association between level of knowledge on antimicrobial stewardship programme among health care providers and selected demographical variables and prepare and distribution an information booklet on antimicrobial stewardship programme among healthcare providers. **Methodology:** Qualitative research approach was used for the study and Non experiment convenient sampling was selected. The study was based on the concept Health promotion model. The study was conducted at selected hospital, Perinthalmma among health care providers using Non probability convenient sampling technique. The data was collected through semi structured questionnaire from 100 health care providers. Analysis: Data were analysed by descriptive and interferntial statistics. Result: The knowledge on antimicrobial stewardship programme among health care providers using semi structured questionnaire revealed that fifty six percentage of participants had excellent knowledge, thirty three percentage had good knowledge and eleven percentage had average knowledge. **Conclusion:** The study concluded that there is a significant association between knowledge on antimicrobial stewardship programme among health care providers and selected demographic variables such as experience and education status.

KEYWORDS

Antimicrobial stewardship programme

Health care providers

INTRODUCTION

BACKGROUND OF THE STUDY

Microbes are tiny living things that are found all around us and are to small to be seen by the naked eye. Antimicrobials are routinely used for variety of clinical conditions but are also misused leading to drug resistance bacteria in clinical practice. Stewardship is defined as "the careful and responsible management of something entrusted to one's care". It was originally applied in the health-care setting as a tool for optimizing antimicrobial use, termed "antimicrobial stewardship" (AMS). When applied in conjunction with antimicrobial use surveillance, and the WHO essential medicines list (EML) AWaRe16 classification (ACCESS, WATCH, RESERVE), AMS helps to control AMR by optimizing the use of antimicrobials. Increasing awareness and practice of Antimicrobial Stewardship (AMS) has gained immense importance in Indian hospitals for preventing the irrational use of antibiotics. India is one of the world's largest consumers for antibiotics. Assessment of the local Knowledge, Attitude and Practices (KAP) of Antimicrobial Resistance (AMR) and AMS among Healthcare Providers (HCPs) will help in designing effective public health policies and engaging the community in campaigns against increasing microbial resistance. The study concluded that government run hospitals can run low budget antimicrobial stewardship program with sustainable impact on antibiotic consumption. For a successful AMSP, it requires change in attitude, commitment, and administrative support rather than a huge financial support.

NEED AND SIGNIFICANCE OF THE STUDY

A qualitative interview study was conducted on 2018 by Kelsey Baubie, Catherine Shaughnessy, in a teritiary care hospital, Kerala. The study aimed to evaluate the antibiotic stewardship programme and to determine what barriers and facilitators to antibiotic stewardship exist within a healthcare facility. They designed 31 semistructured interviews and 4 focus groups with hospital staff ranging from physicians, nurses, pharmacists and a clinical microbiologist. The result revealed that key facilitators of antibiotic stewardship (AS) at the hospital included a dedicated committee overseeing appropriate inpatient antibiotic use, a prompt microbiology laboratory, a high level of AS understanding among staff, established guidelines for empiric prescribing and an easily accessible antibiogram. We identified the following barriers: limited access to clinical pharmacists, physician immunity to change regarding stewardship policies, infrequent antibiotic de-escalation, high physician workload, an incomplete electronic medical record (EMR), inadequate AS programme (ASP) physical visibility and high antibiotic use in the community.

Consider these studies, we concluded that the implementation of antimicrobial stewrdship programme in the hospitals has increased. The antimicrobial stewardship programme team members maintaining the appropriate utilization of ASP. Antimicrobial stewardship (AMS) programs have been developed for optimizing the treatment of infections, to reduce infection-related morbidity and mortality, to limit the appearance of multidrug-resistant organisms (MDROs), and to reduce unnecessary antimicrobial use. Assessment of the local knowledge, Attitude and Practices of antimicrobial resistance and Antimicrobial stewardship among health care providers will help in designing effective public health policies. Hence we are choosing this topic for our research study.

METHODOLOGY

3.1 RESEARCH APPROACH: The investigators selected "Quantitavie research approach" as research approach on the basis of problem and objectives to be accomplished. In this study knowledge regarding antimicrobial stewardship programme is assessed among health care providers at selected hospitals, Perintalmanna.

3.2 RESEARCH DESIGN: Non experimental survey design was adopted for the present study.

3.3 SETTING OF THE STUDY: KIMS Alshifa Hospital, Moulana Hospital and Ramdas Clinic and Nursing home in Perinthalmanna

3.4: SAMPLE SIZE: 100 health care providers at selected hospitals, Perinthalmanna.

3.5 CRITERIA FOR SELECTING THE SAMPLE:

Inclusion criteria:

- Health care providers who are willing to participate in the study.
- Health care providers who are available during the data collection.
- Health care providers includes physicians, nurses, pharmacists and laboratory technicians.

Exclusion criteria:

- Health care providers who had attended classes related to antimicrobial Stewardship programme.
- Health care providers who are not available during the data collection.
- Health care providers who participated in any antimicrobial stewardship programme.

3.6 SAMPLE TECHNIQUE: Non probability convenient sampling technique was used in the study.

3.7 VARIABLES OF THE STUDY: Variables are the qualities, properties or characteristics of a person think or situation that change or vary.

- Demographic variables: Age, type of health care provider, working unit, total years of experience and education status.

3.8 DEVELOPMENT AND DESCRIPTION OF THE TOOL: Data is a piece of information obtained by a study. Data collection is gathering of information to address the research problem. Data collection tool is the device used to collect data. In the present study the tool was prepared on the basis of objectives of the study. In the development of tool, the following steps are involved which are review of literature, preparation of first draft, personal consultation and discussion with experts from field of nursing.

3.9 METHOD OF DATA COLLECTION: The questionnaire consists of Tool 1, Tool 2.

TOOL 1: Semi structured questionnaire for assessing socio demographic data.

Semi structured questionnaire consist of 5 items seeking information about socio demographic variables are age, Health care provider, working unit, experience and education status.

TOOL2: Semi structured for assessing knowledge of Antimicrobial stewardship programme.

Semi structured questionnaire consists of 20 questions for assessing knowledge of antimicrobial stewardship programme among health care providers. Each positive carried 1 mark and negative response carried 0 mark.

SCORING KEY: The questionnaire consisted of (20) closed ended-multiple choice questions with a single correct answer. Every correct answer was accorded a score of one (1) and every incorrect/ unanswered item was accorded zero (0).

3.10 CONTENT VALIDITY: Validity of the instrument refers to the degree to which an instrument measures what it is supposed to be measuring.

3.11 RELIABILITY : Reliability of an instrument degree if consistency with which it ensures the attribute it is supported to be measured. The reliability of measuring tool can be assessed on the aspect of stability, internal consistency and equivalency depending on the nature of the instrument.In this study the reliability is measuring by split half method.

3.12 DATA COLLECTION PROCEDURE: After obtaining the formal permission and advice from the Principal of Alshifa College of Nursing, Perinthalmanna the study was conducted from 27/11/2023 to 29/11/2023.The subject was selected by non probability convenient sampling technique. The investigators gave self instruction and explained the purpose of the study. The subject was answered anonymity and confidentiality of the information provided by them was ascertained and written consent was obtained. The study was conducted by administering semi structured questionnaire.

3.13 PLAN FOR DATA ANALYSIS: The data collected were organized and analyzed in term of objective of the study using.

 • Descriptive statistics and inferential statistics.

A master data sheet was prepared with response given by individual.

ANALYSIS

Data analysis based on following hypothesis:

H_1: : There is a significant association between the knowledge of health care providers with selected demographic variables.

The data was entered in the master sheet for analysis and interpretation. Descriptive and inferential statistical procedures such as frequencies, perecentages, paired t-test and chi square tests were used.

TABLE-1

Frequency and percentage distribution of health care providers according to age, type of health care provider, working unit, experience and educational status.

SLNO	Demographic varriables	Frequency(f)	Percentage(%)
1	Age in years	58	58%
	18-27 years	23	23%
	28-35 years	11	11%
	36-43 years	8	8%
	44 and above	8	8%
2	Health care providers		
	Physician	8	8%
	Nurse	54	54%
	Pharmacist	15	15%
	Laboratory technician	23	23%
3	Working unit		
	Ward	32	32%
	ICU	26	26%
	Ward and ICU	6	6%
	Pharmacy	13	13%
	Labortory	23	23%
4	Experience		
	<5 Years	59	59%
	5-10 years	26	26%
	11-15 years	9	9%
	Above 15 years	6	6%
5	Education status		
	Diploma	34	34%
	Degree	58	58%
	Postgraduate	9	9%
	Others	1	1%

Table 1 shows the majority of the health care providers 58% belongs to the age group of 18-27 years,23% is included in the age group of 28-35, 11% in age group of 36-43 and remaining 8 % belongs to the age group 44 and above .54% of the study participant are nurses,23% are laboratory technicians,15% are pharmacist and 8% are physician.32% of study participant selected from ward ,26% from ICU,23% from laboratory,13% from pharmacy and remaining 6% from ward and ICU .59 % of participant having <5 years of experience ,26 % having 5-10 years of experience, 9 % having 11-15 years of experience and 6% having above 15 years of experience.58% of participant have degree,34 % have diploma ,9% are post graduates and 1% of them belongs to other level of education status.

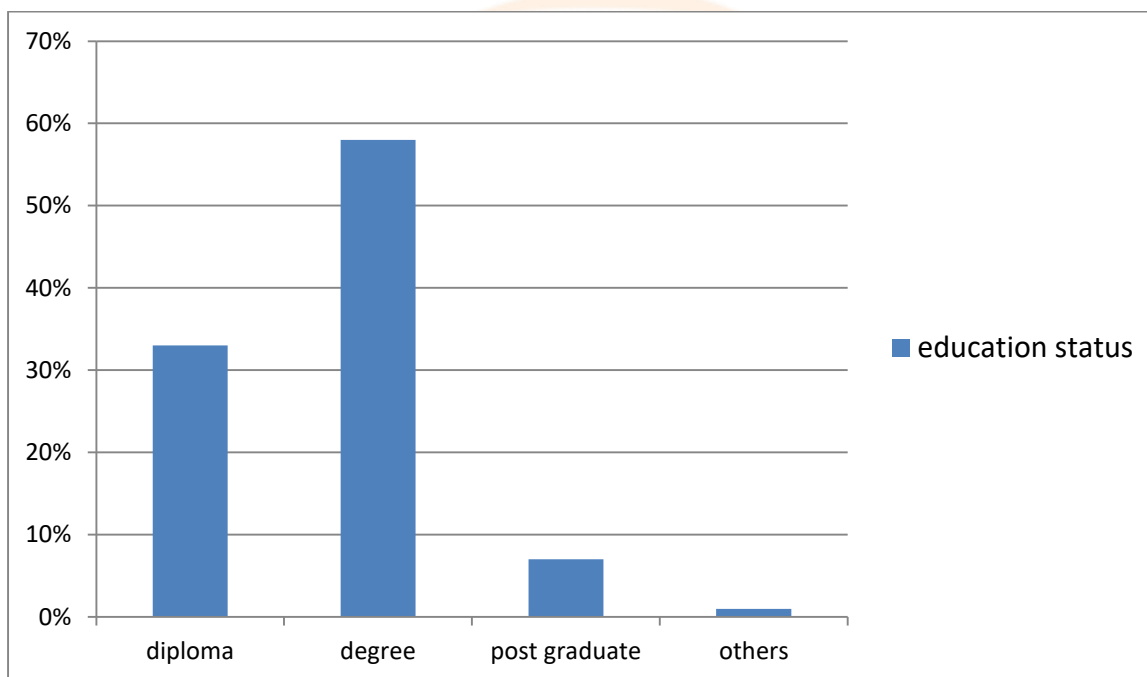**FREQUENCY DISTRIBUTION OF HEALTH CARE PROVIDERS BASED ON EXPERIENCE**

(n=100)
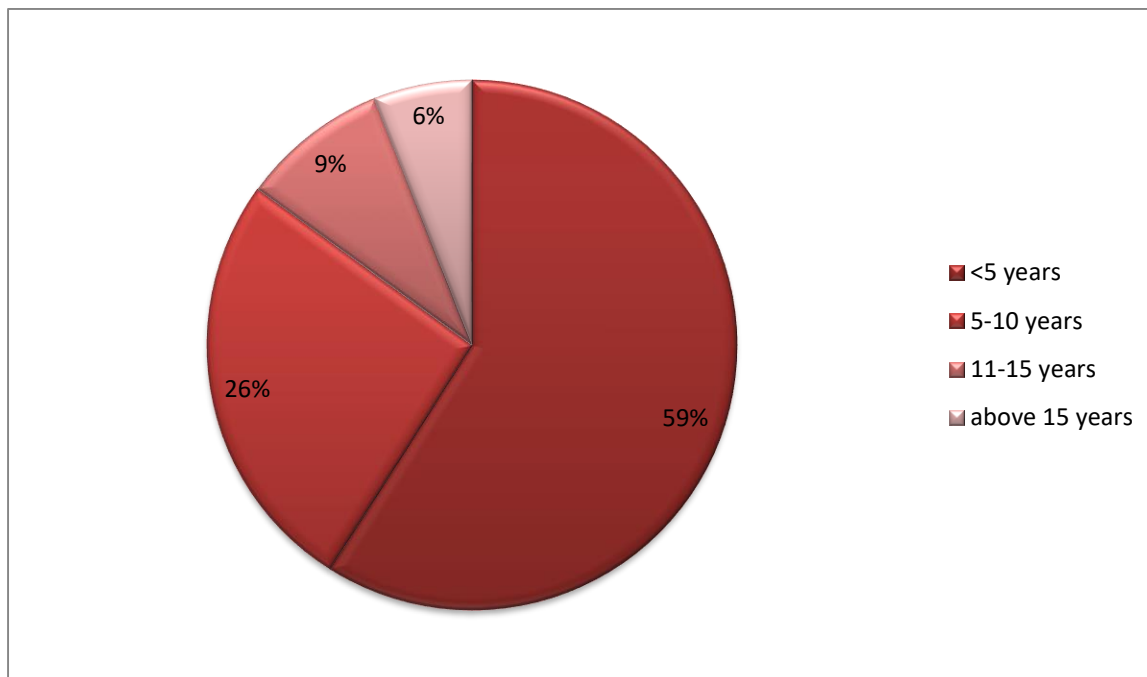
The above figure shows that 59% participant have <5 years of experience ,26% have 5-10 years of experience,9% have 11-15 years of experience and 6% of them having above 15 years of experience.

FREQUENCY DISTRIBUTION OF HEALTH CARE PROVIDERS BASED ON EDUCATION STATUS

(n=100)

The above figure shows that 58% of participant have degree,34 % have diploma ,9% are post graduates and 1% of them belongs to other level of education status. There is significant association between knowledge on antimicrobial stewardship programme among health care providers and demographic variables such as experience and education status (p value<0.05). Thus H1 is accepted.

DISCUSSION

The descriptive study was conducted to assess level of knowledge on antimicrobial stewardship programme among health care providers in selected hospital at Perinthalmanna. The study was to evaluate the association between level of knowledge in antimicrobial stewardship programme among health care providers and selected demographic variables. The Sample size was hundred health care providers. Data was collected by semistructured questionnaire form. The discussion of the study is based on findings obtain from statistical analysis. The findings were discussed in relation to the objective of the study. Frequency and percentage distribution of health care providers according to their selected demographic variables related to out of 100 samples majority of the health care providers (58%) belongs to the age group of 18-27 years,23% is included in the age group of 28-35, 11% in age group of 36-43 and remaining 8 % belongs to the age group 44 and above .The present result was fifty six percentage of the participants have excellent knowledge, thirty percentage of the participants have good knowledge and eleven percentage have average knowledge.   Association between knowledge on antimicrobial stewardship programme among health care providers and selected demographic variables shows that there is a significant association between the level of knowledge on antimicrobial stewardship programme among health care providers and selected demographic variables such as experience and education status (p value<0.05). There is no association between the level of knowledge on antimicrobial stewardship programme among health care providers and selected demographic variables such as age, type of health care provider and working unit (p value>0.05).

CONCLUSION

Out of 100 health care providers, majority of the health care providers (58%) belongs to the age group of 18-27 years,23% is included in the age group of 28-35, 11% in age group of 36-43 and remaining 8 % belongs to the age group 44 and above. Regarding working unit ,32% of study participant selected from ward ,26% from ICU,23% from laboratory,13% from pharmacy and remaining 6% from ward and ICU. Regarding experience 59% participant have <5 years of experience ,26% have 5-10 years of experience,9% have 11-15 years of experience and 6% of them having above 15 years of experience.Regarding educational status 58% of participant have degree,34 % have diploma ,9% are post graduates and 1% of them belongs to other level of education status. The study result showed that majority of the health care providers having excellent knowledge on antimicrobial stewardship programme 56% of study participants have excellent knowledge , 33% have good knowledge and 11% have average knowledge.

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