Study to assess the awareness and knowledge of infection control practices amoung the professionals within radiology department in four hospitals of central kashmir Srinagar.

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ABSTRACT - Infection control is a hypercritical component of healthcare carriage, to make sure patient safety and staff safety. The radiology department, being fundamental part of hospitals, plays important role in patient care. This research study aims to assess the awareness and knowledge awareness of infection control practices among radiographers, radiologists, students and house-keeping staff in four hospitals in Central Kashmir Srinagar. This questionnaire-based study was carried out in four hospitals of Central Kashmir for period of 6 months, permission was taken from the hospitals. A questionnaire was developed based on existing infection control guidelines and relevant literature and was administered to participants. This study outcomes that the Radiologists have 91.51% positive knowledge, Technologists have 85.85% positive knowledge, Students have 78.55% and Housekeeping have 65.50% positive knowledge towards infection control methods in radiology department and among all the participants Radiologists have highest knowledge about infection control methods, and house-keeping have least knowledge with 34.0% negative knowledge. This study identified areas where extra training and education are required to upgrade infection control.

Keywords: Radiology department, Central Kashmir, Infection, Awareness, Knowledge, PPE, Hand hygiene, Disease, Infection Control Methods.

I. INTRODUCTION

Infection results from hazardous bacteria multiplying inside of us. These microbes could be fungal, viral, or bacterial. These microorganisms may begin to proliferate and spread throughout the body anyplace. These infection-causing bacteria rarely occur in our bodies. These microbes cause ailments and harm to our body's immune system. Illness symptoms and signs which includes fever, cold, burning in the neck, painful mouth or throat burning during urination, etc. are caused by infection. When an infection fails to cause any symptoms, it is often referred to as subclinical, and when it does, it is referred to as clinicallyapparent.
The most prevalent types of infections are as follows:
1) Viral infections Illustrations include the flu, the common cold, chicken pox, and HIV.
2) Bacterial infections Examples include tuberculosis, urinary tract infections, and more.
Infection with a fungus Examples include yeast infections, ringworm, and thrush.
4) Infections caused by parasites Malaria, tapeworm infections, etc.
3) Several typical hospital-acquired infections includeSurgical site infection (SSI), pneumonia caused by ventilator use (VAP), urinary tract infection (UTI), and blood stream infection (BSI). The pathogenic microbes that cause healthcare-associated infections might befound in the surfaces, water, and the air.Infection control is concerned with hospital-associated infections (HAIs) that patients pick up while seeking care in a hospital setting. The standard infection control precautions (SICPs), which aim to prevent HAIs from both

known and unknown sources of infection, include hand hygiene, personal protective equipment, occupational exposure care with sharps, sound care of linen, sound care of uniforms, and undamaged waste disposal.The guidelines used in radiology departments' infection control policies were taken from SICP and are categorized into two broad categories: standard departmental cleaning and individual practices.The radiology department receives hundreds of patients daily. They might all be sources or NIS targets. Furthermore, due to the rise in patient volume and the complications of the operations, developments in diagnostic and interventional radiology over the past three decades have resulted in longer stays in the radiology department.

During their time in the radiology department, patients interact with a variety of radiographic tools are the primary causes of NIS.The main vectors for the spread of nosocomial illnesses are healthcare workers' (HCWs) hands and personal objects.Most studies on knowledge, attitude, and hand hygiene practice indicate good knowledge but poor application.There is a dearth of information on the methods used to disinfect stethoscopes, cell phones, and aprons.(Kumar A, Keri VC, Khan MA, Ranjan P at.al.,) These germs can spread through contact, which can be direct or indirect, droplet transmission, airborne transmission, and common vehicles (by consuming contaminated food or using a sick person's medical equipment).CDC recommends the following two measures to improve infection control in the healthcare system: Standard precautions for patient care include thorough hand washing, the wearing of masks, and transmission precautions such as contact, droplet, and airborne safety precautions. (Dancer SJ,2010).

II. MATERIAL AND METHODS

A questionnaire-based study on assessment of the Radiology Department's understanding of infection prevention and assessment of the Radiology department's awareness of infection control techniques. Research approach was Observational approach,Sampling Technique used was Convenience sampling technique, the length of the study was Six months i.e., from October 2022 to March 2023 and was carried in Four different Hospitals of Kashmir Srinagar. House-Keeping Staff questionnaire was Biased. The questions were translated into local language (Kashmiri) for those who were not able to understand.

III. SELECTION CRITERIA

Included were four various hospitals in Srinagar, Central Kashmir. This study comprised the radiologists, technologists, students, and housekeeping staff that worked in the radiology departments of these four hospitals and those who were not willing to engage in the study and those who weren't present during study time were excluded.

Method of Data Collection

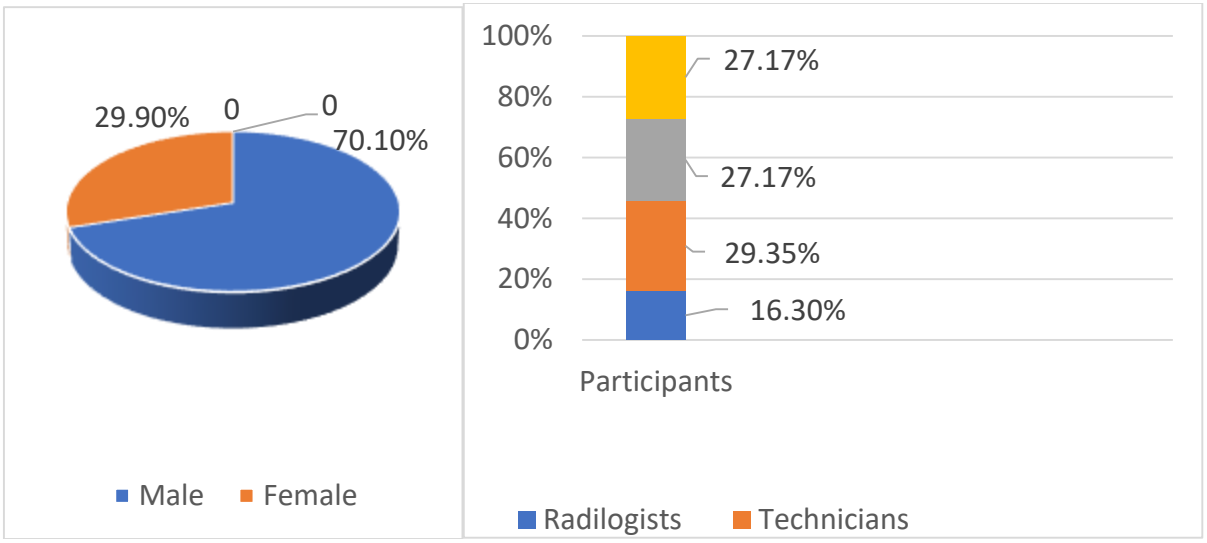
The data was collected from the radiological staff, which included radiologists, technicians, students, and housekeeping employees,at four separate hospitals in Kashmir. Each person received an explanation of the study's goal. A total of 184 people were eventually recruited in the study after assessment.

Statistical Analysis

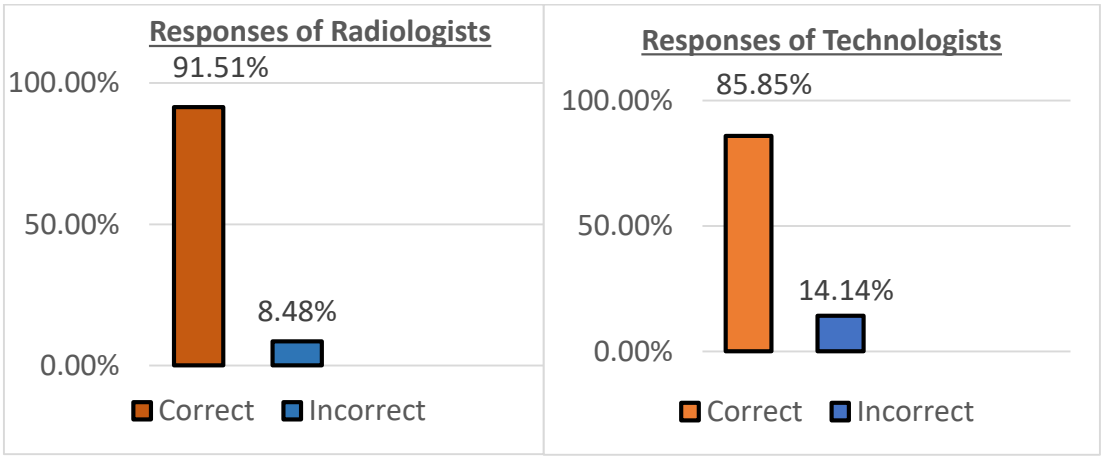
The data that was collected was assembled, tabulated and examined. Google Form was used for analysis.

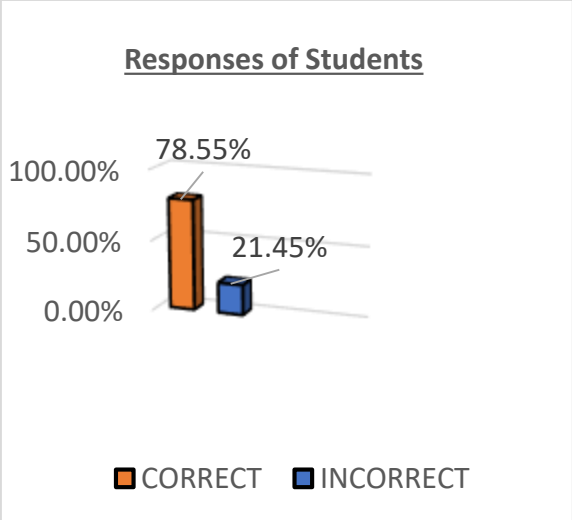
IV. RESULTS

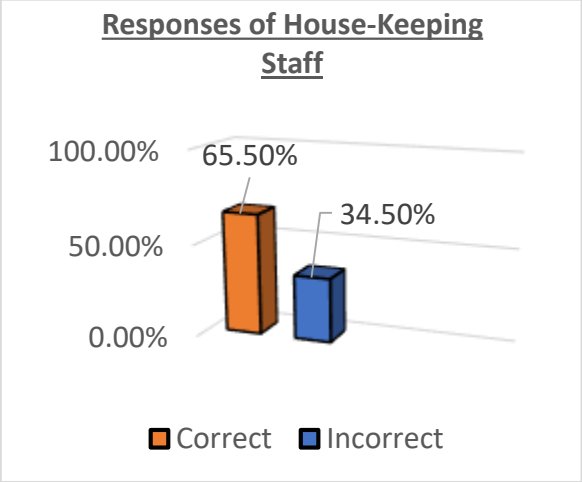
A Questionnaire- based study was conducted in four hospitals of Kashmir with size of 184 radiological staff, which include of 30 radiologist, 54 technicians, 50 students and 50 house- keepers.



Pie chart shows the gender wise distribution participants.
The above column shows the distribution between the radiologists, technicians, students and housekeeping.
Values were tallied and statistically analysed after data collection. The sample size was higher in the technician group (54), whereas it was lower in the student, housekeeping, and radiologists' groups (50, 50, and 30 samples, respectively).
The knowledge and awareness of infection control methods was good among all the participants since most of them control infection in the radiology department by self-precautions. As radiologists, technicians, students, and housekeepers were all included, and the outcomes of all of them were compared.







V. FINDINGS

The study's findings indicate that radiologists are the most expertise (91.51%), followed by technicians (85.6%), students (78.55%), and housekeepers (65.50%) who have the least knowledge about infection control methods in radiology department.

VI. DISCUSSIONS

An infection happens when bacteria multiply inside of our bodies. Most infectious diseases are communicable and are transmitted from one individual to another. [(1)] Although everyone is aware of how to control infection but awareness and practice are crucial to keeping infections under control.In four different hospitals in Central Kashmir, the study was carried out. It was a questionnaire-based study with two sets of questions that were both awareness- and knowledge-based. The objective of this study was to evaluate the knowledge and awareness regarding infection control methods among radiologists, technologists, students and housekeeping staff and it was found that the radiology department's housekeepers lacked knowledge in these hospitals.

A study was conducted on Infection control knowledge and practices among radiographers at government hospitals in the Gaza Strip-Palestine: A cross-sectional study, intheir study they concluded that radiologists reported having a moderate level of infection control knowledge and experience. The majority of radiographers lack training in infection control. For practicing radiographers to perform better at infection control measures, this article has underlined the need for a continual education and training program. [(11)]Another study on Knowledge, Attitude and Practices Regarding Biomedical Waste among Paramedical Workers at Karimnagar town (AP) India. In this study they revealed that nurses had better attitudes regarding trash sorting, proper disposal, following rules, and cooperating with programs than did the housekeeping staff and technicians. [(12)]In this study, we also came to the conclusion that both housekeepers, other radiological staff and students generally lack awareness about infection prevention techniques. The study was comparable to the above two studies listed.Therefore, there is room to further investigate the radiology department of four hospitals of CentralKashmir to check staff members knowledge and understanding of infection management. Infection is a significant matter that affects the conveyance of healthcare assistance all around the globe. It is one of the most significant factors contributing to morbidity and mortality during clinical, diagnostic, and therapeutic procedures. Due to rising healthcare costs and the overuse of the available resources, HAI'S are a significant hindrance to patient treatment.In addition to inadequate information, this low compliance may also be caused by a lack of proper resources, such as the department's training initiatives on infection control and it is recommended that all radiology department staff members receive the appropriate training on how to control infection in the department. To keep patients safe, radiological equipment needs to be professionally decontaminated, and equipment must be used properly and covered.

VII. CONCLUSION

The study's findings showed that housekeeping staff at various hospitals in Central Kashmir had the least knowledge of infection control (65.50%), followed by students (78.55%) and technicians (85.85%) in the radiology department. Since patients spend the majority of their time in the radiology department, it is necessary to educate practitioners about the value of infection prevention and control techniques so that there is a lower risk of infection transmission in the radiology department. As a result, it is advised that all hospitals organize regular training sessions on how to control infection for all healthcare professionals involved in patient care, particularly housekeepers. Online program modules and posters recommending the use of different coloured containers for waste are possible, but they must be of a high standard to be accepted, and in-person communication is still crucial. Programs to promote hand hygiene are necessary, and a group dedicated to anticipating infections has to be more active in planning and updating current procedures. A clearly worded infection control guideline should be posted in a prominent location in each hospital's department. Regular infection rate monitoring and information dissemination that acts as a conduit between management and healthcare workers should be implemented,additionally, there must to be federal regulations or radiological rules for infection control in every hospital.

VIII. REFERENCES

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