**IQR IQRA NATIONAL UNIVERSITY**

 **DEPARTMENT OF ALLIED HEALTH SCIENCES**

 **Mid Term Examination (Spring-2020)**

**Course Title: Research Methodology (MLT/RD 6th) Instructor: Ms. Bakhtawar Tufail**

**Marks: 30**

**Note:**

* Attempt all questions.
* The below question carries 30 marks in total.
* You are allowed to use all sorts of information from your notes, book and Online sources.
* Avoid copy pasting, write everything in your own words as a Turnitin Plagiarism report will be generated for every paper. Above 30 percent plagiarism is not acceptable.
* Good luck.
1. **Answer the following questions. (30)**
2. According to know what are the qualities of a good research? And why? **Choose a precise topic**

Your proposal must be define a series of research questions, problems Or issues that will be addressed through your proposed project. The type of dissertation research questions you select influences on everything in your proposal starting from the content, objectives and the methods you follow.it is very important to choose a precise topic because If you choose a wrong topic, all these will be inappropriate and you will be lost a great marks or worse still, You should be requested to redo the work. At times, it may be very tricky to select a precise topic from a given list. If you fall in such situation, then make sure you should consult with your supervisor first before further move.

1. **Create a brief introduction**

  In an introduction, you give to the reader an idea of what your research will be about.  You should have a thesis statement that does this.  If your proposal is to be persuasive, you should tell the reader what point you will be trying to make. Everything, whether dissertation researches methods, issues or any other sections, has a start. Before you introduce your proposal, you need to collect all your informations and understand to show them the main concept of your proposal. This is what you need to explain to your readers. As a rookie, first you should need to start by looking at various dissertation research question examples and check how the experts have done it before. This all just needs to be precise. Do not include unnecessery informations that adds no value to your contents.

1. **Mention your problem statement**.

 You should must have a very clear thesis or objectives. You should need to be able to say what the project or work will be about with in a few sentences .In this part of the proposal, you should give the evidence to support the point you are trying to make.  Or, if you are just writing to convey information rather than to persuade, you should cover the major information that needs to be presented to in front of readers. You have no proposal if you miss out on the statement of the problem. This is where lecturers will pay a lot of attention and will determine whether you proceed with your study or not. You should need to show them that there still exists a real problem in the society and that is why you want to get out there, collect information and use the findings to come up with recommendations that can bring a change. understand how to format this section in a more precise way.

1. **Outline your literature review**

You should also circumscribe the extent or boundaries of your proposal. No proposal should be amorphous. So, therefore set your boundaries and let your readers know them. Well, convincing people about your idea, statement on dissertation research methodologies is sometime very difficult but when you have the right materials, this may be one of the simplest things ever. One of the ways to prepare for research writing is by carrying out a vast exploration and once you find a perfect topic. You must make sure you can define and explain everything that is the part of your proposal and important or otherwise, you may be overwhelmed with questions.

1. **Create a precise questionnaire**

The main tool that will help you collect useful data is the questionnaire. All questions have to be formatted in line with your specific objectives. If you formulate wrong questions, you will be not able to achieve any of your aims in doing this research. Therefore,it will be better to make sure you do in-depth research before you settle on any question. If you are unsure of this, you can do the pretesting of the questionnaire where you can create one site and try to collect data on a few individuals. You can request for cheap dissertation services if you feel overwhelmed.

1. Choose a topic of your own choice and write its literature review. (every student should choose a topic themselves, if any of your topic matches with the other student, your paper will be marked as fail. Also make sure the Literature review is rephrased by you properly and any similarity or copy paste will mark the paper as fail however, a 30 percent plagiarism is allowed. Literature review should be minimum 2 and maximum 3 pages long with 12 font size. Put all references at the end of the paper from where you collected your material for the literature review). You will be given full marks if your topic is unique and your Literature review is self written. **INTRODUCTION**

***Mycobacterium tuberculosis***

is a species of pathogenic bacteria in the family Mycobacteriaeae and the causative agent of tuberculosis. It was first discovered in 1882 by Robert Koch, the surface of *M. tuberculosis is coated with mycolic acid* . This coating makes the cells impervious to Gram staining, and due to this reason, *M. tuberculosis* can appear either Gram-negative or Gram-positive. Acid-fast stains such as Ziehl-Neelsen, or fluorescent stains such as auramine are used instead to identify *M. tuberculosis* with a microscope. The physiology of *M. tuberculosis* is highly aerobic and requires high levels of oxygen.it is the Primarily pathogen of the mammalian respiratory system (lungs), it can infects the lungs. The most frequently used diagnostic methods for tuberculosis are the tuberculin skin test, acid-fast stain, culture, and (PCR) polymerase chain reaction.

**Microbiological/Characteristics:**
*Mycobacterium tuberculosis* is a non- motile and they are acid-fast, obligate aerobe. The bacilli are 2-4 um in length and they have a very slow generation time of between 15 and 20 hours.teh cell wall of Mycobacterium is mainly composed of acidic waxes therefore it is said to be they have unique cell wall specifically there cell wall is composed of mycolic acids. With the help of unique cell wall *M. tuberculosis* is unusually resistant to dying and chemicals, contributing to the ease with which it is transmitted.

**Encounter/Entry:**
Mostly Tuberculosis is transmitted by inhalation of aerosols containing the tubercle bacilli. The required inoculum size for their infection is usually very high, but they are easily occurs with exposure to a patient who is currently infected. The products of dried aerosols, droplet nuclei, are particularly still infectious because the bacilli remain in the air for an extended time, and upon inhalation they can easily reach to the alveoli. The severe damage is related to infection is caused by the reaction of the host. There are two Main phases of tuberculosis infection, primary and secondary.

1. **Primary/infection:**
Primary tuberculosis is the initial infection of the host, Primarily infection usually being mild and asymptomatic. May be they have no symptoms. A healthy person recently infected with the mycobacterium may exhibit flu-like symptoms and has no reason to suspect tuberculosis. For a long time untreated, the bacilli infect and multiply within pulmonary alveolar(Lungs) macrophages, migrating to the Hilary lymph nodes. An immune response is exhibited by the T-helper cells, and the inflammation develops at different sites. A person may be test positive in the tuberculin skin test at this point, and a chest x-ray may shows some opacities in the lungs. Tuberculosis gets its name from the small granulomas called tubercles, which consist of epithelial cells, giant cells, and lymphocytes, where the bacteria are contained. In normal patients, the lesions in the lung tissue become fibrotic and heal, but they are still visible in x-rays for the patient's lifetime. During the latency, a person cannot transmit tuberculosis to others.

**Secondary/disease:**
People having weakened immune systems rapidly expose to secondary tuberculosis, while in a healthy, Young untreated patient, the disease may usually remains latent for many years. In some people, the infection may never develop into tuberculosis disease. A frequent cough is the most prevalent sign to pulmonary tuberculosis disease. While the cough may initially be unproductive, increased inflammation and necrosis of lungs tissues results in the production of a bloody sputum. While this disease is usually limited to the lungs, *M. tuberculosis* can colonize most parts of the body Such as brain, Kidneys, Intestine, Spine etc. Infection of the spine may cause its collapse, leading to lifeltime disability.

**Prevention:**Improving the standards of living areas, basic advanced measures and diagnostic techniques has proven to control the spread of tuberculosis. The most important key to reducing the spread of tuberculosis is early identification and treatment in a proper way of infected individuals so that they will not transmit it to others. It is very important to know that the restricting contact during the initial treatment stages may prevent transmission.The vaccine is only used in countries where tuberculosis is endemic, and this vaccine is not used in the United States. When a person has been vaccinated with BCG, he will have test positive using the tuberculin skin test. The positive result is a requirement for being determined successfully vaccinated. Tuberculosis is a now treatable, communicable disease.

2.**Aims and objectives** The number of reported -TB cases has been increasing in recent estimated of 2017.In 2017 , 10 million people infected with TB and 1.6 million died from TB (including 0.3 million among people with HIV). In 2017 an estimated One million children become infected with TB and 230,000 children died of TB (including children with HIV associated with TB).An estimated 54 million lives were saved through TB diagnose and treatment between 2000 and 2017.Ending the TB epidemic by 2030 is among the health targets of the sustainable development Goals.

 **this** Study found, that majority of the participants (56.1%) were in the age group of 16 - 30 years. 64.2% were married. Majority of the participants education were whether under primary or primary level. 24.3% participant’s family member and 14.5% of neighbor were having TB  **Conclusion:** We can conclude that, many possible factors for MDR-TB. There is an urgent need for further study to confirm the exact factors in our society and address those immediately

**3. Methodology**

This descriptive cross sectional study was conducted among the tuberculosis patient admitted in different hospitals where referred patients come from all corner of the country. We collected large quantity of cases randomly from the different hospitals. Semi-structured and pretested questionnaire were introduced to collect the data. Clinical and treatment data i.e. duration of TB drug intake, report of sputum, X-ray and blood test etc. were extracted from the hospital record. Those laboratory investigations were performed prior to the hospital admission and before start of TB treatment. Treatment category was done according to national TB control Programme. Informed written consent was obtained from the all participants before data collection.

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