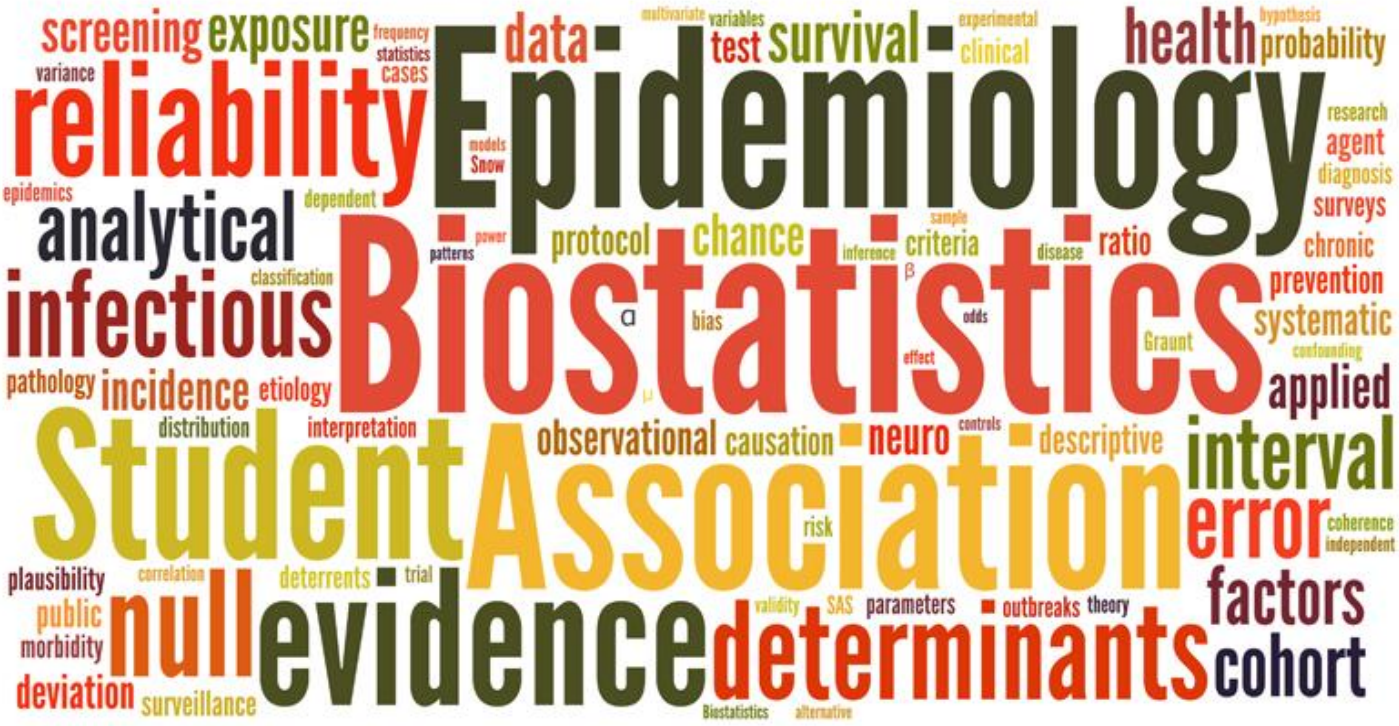
University of Jordan
Faculty of Medicine



☑ Sheet (Notes) ☐ Slide ☐ Handout

Number : 4

Done By : Dana Rida

Subject: Writing Scientific Research Paper

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Price:

Date:

Epidemiology and biostatistics

Before I begin with today's lecture , I want to go back to the second slide to explain the difference between sufficient and necessary since a lot of people apparently didn't get it well.

Sufficient factor, means that if I have the factor or I got exposed to it I must have the disease, let us take an example ; in the slides it was the rabies virus , so if someone got exposed to the rabies virus that means he should develop rabies no matter what. That means that this virus whether alone or cooperated with other factors it will cause rabies.

necessary factor, I will never develop the disease if I don't have the necessary factor working with other factors, and if I only have this factor alone with no other factors I won't develop the disease, for example, mycobacteria TB *,to say* I got exposed to this bacteria and I have it in my body but I don't have the other factors such as being immunocompromised to develop the disease, will I have TB? No , what if I was immunocompromised but I never had the bacteria in my body does that mean I will develop TB? Again no , so the necessary factor depends on having other factors to develop the disease which those other factors can't develop the disease without the necessary.

I hope this clears things out , now back to today's lecture

Writing scientific research paper

Remember these notes are not to memorize literary but to help you get the idea.

This lecture will guide us on how to write a report, article or a paper about our research and what we have done, our records , experiences and present our findings.

So in general when you do a research you will send it to a journal, then they will look at it, look to the level of scientific work you have done , especially your methods if they are right , the language the you have written with, your results and everything, then they evaluate it ,send it to reviewers to look at it, then decide whether to accept the article or not.)

Journals have certain guidelines, so before I want to send my study to the journal, I go to their website and I will find a section that is called instructions, from there you will

know their guideline, about how they like the article to look like, what should be included, all the details you need to know that are specific for each journal, but there are general guidelines, that are acceptable from all journals and scientific writers. (this whole paragraph not for memorizing ,just to know why we will be using guidelines later on in writing the article)

Slide 2

Why should I print using 12 point font? Because if people start using different sizes, number of pages will differ.

Usually there is a limit to number of words and pages you need to stick to.

Double spacing is important to make it easier to read and to help the instructor to comment, if he want to add something ,correct another.

Single sided : always print on one side of the page. Though on both side it's environmentally friendly, but for academic purposes we print on one.

Slide 3 (extra important things not just for the exam but for the research we will be working on)

Title page : obviously to write the title of my research, names of the authors written under the title , date, semester, what scientific field my research is in.

content page .. each content with the number of its page in the research.

Tables page : each table and where I can find it; on which page.

Appendices page : something not part of the research itself but related to it, and I add it in the end for the reader to have a look at it(the appendices page it is part of the first 5 pages where it tells you the page of each appendix but the appendices themselves are added in the end). In my research the best thing to put is a copy of the questionnaire(a copy in Arabic and English) . Some readers would really like to know what was the questionnaire .

Abbreviations page : like PHC : primary health care, WHO (not to memorize), whatever you use needs to be included in this page, each abbreviation and what it stand for.

Abstract :, it's a summary , a paragraph that summarizes the study that you have done,(it's something totally different from recommendation) it is part of the first five pages , but we don't write it only after I have finished my whole research.

These first 5 pages are numbered with roman numbers because they are additional ones.

So after writing these 5 pages we actually still didn't start with page number 1. Page number one starts after the abstract, where it begins with the introduction.

From page 1 we started now the research paper.

Slide 4

Some people may add a 5th section which is conclusion, that concludes all of our results, which it's usually the last paragraph of the discussion section. It's better to be part of discussion.

Slide 6

Introduction and literature review are in one section.

In the introduction I include the phenomena the risk factors, and start convincing the reader that this health problem is an important problem effecting a large number of the world , many people die, mention how many people are effected, what is the impact of this problem and why I'm doing this study. Show that it is significant.

Previous research : many people all over the world have studied this phenomena before us , so we need to know what were their findings internationally then regionally then in Jordan.

Everything in introduction has to be in brief

After seeing the previous researches we will look for a gap, something missing in the research, and that's the reason why we are studying this phenomena, because if something has been studied from all its sides and everything is known there are no questions to answer, So nothing new to find. it's better that there is something missing and needs to be known.

Then I should fill my research hypothesis or questions in the introduction (one of them no need to both)

Slide 7

Literature is all the work that has been written about this topic

So when we review, we extensively do a research on the internet all over the search engine ,under the key words related to our topic, to see as much as we can from the research in this area , and what were the findings of their researches, were there associations or not, or there is still a debate.

Literature review can be from 5 pages to 10 ,20 you can provide as much as you like about the background information about the disease; it's history, how it wasn't covered. No boundaries in the literature review. You can include even the etiology of the disease we are studying to provide the reader more information and relate them to the risk factors. So we will quote from other researches(don't copy and paste) only see their findings and rephrase the sentences, nothing is from our findings (keep in mind to stay away from plagiarism)

We do some subsections because it's long; like first history, etiology of the disease , then risk factors, each in a separate subtitle , so the reader will know what he is going to read about.

Slide 8

To avoid plagiarism try mentioning from where you took this information(give credit). The author and the year mentioned between brackets after the info you quoted.

Plagiarism using words and ideas without mention from whom you took it or from where.

Mentioning the reference between the text or in the footer of the page depends on what your instructor prefers, but there has to be a page with each reference alphabetically ordered .

These days it's easy to discover plagiarism by a software that can simply show you from where you took this info. The research will be rejected.

Slide 9

Methods : what did we do, in steps to get out with our result.

So if someone after a couple years comes and see your methods they should be written really well, so that this person will be able to replicate your study(to do the study again, same population, maybe same time, how you worked on it, how you analyzed it etc..)

Before you start the study you should get an approval from the person in this a study, you can't take info from him without letting him know that you are using this info.

So when you go to the field, explain to the people what is the purpose of the study, and who are you, and why they should participate.

Some studies need signed informed consent especially if we are taking body tissues, samples , that this person has been informed about this type of study.

IRB approval : institutional review board.. ethical committee available in all research institutions and hospitals and Universities, so if you want to do a research here in JU, we have an IRB or an ethical committee in the hospital of the university, you give them a proposal with the introduction and methods (what you are planning to do) they will study that and make sure that this study won't harm the participant in any way , to protect the right of the participants, that the questions and the study will not cause the many harm, then you will get the approval letter, without the approval no one is allowed to collect data from the field. The approval concentrates on the methods particularly the questionnaire.

Any journal that I will be working with will ask for my IRB approval.

Confidentiality : happens after collecting the data (only the research team will get access to the data) >> need to include it in your methods. Never ask about the name of the participant (I care about them as subjects)

Privacy: before collecting the data (the person doesn't share the information to the person asking it) never force someone to answer the question they are free not to, instead try convincing them , how confidential this is ,how important they are in this study and how it will help his family maybe in the later years.

Once they give us the data we deal it with confidentiality and not harming the person with it or using it for other purposes.

Sample selection : how you chose the participant(doctor didn't explain much about this point)

Study design : in our research it's a cross sectional (survey)

The methods above must all be included in the research paper.

The lecture is over

Sorry for any mistake

By: Dana Rida