Sri Lakshmi Narayana Institute of Medical Sciences

Osudu, Puducherry-605502

Date:02/05/17

From
V.Senthil kumar
Professor and Head.
Dept of physiology
SLIMS,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean.
SLIMS
Bharath Institute of Higher Education and Research.
Chennai.

Sub: Permission to conduct value-added course: Basic course in Research-an integral part of medical education

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: Basic course in Research-an integral part of medical education on Nov 2017– Jan 2018. We solicit your kind permission for the same.

Kind Regards

DR.V.Senthil kumar

FOR THE USE OF DEANS OFFICE

Names of Committee members for evaluating the course:

The Dean: DR.Jeyalakshmi

The HOD: DR.V.Senthil kumar

The Expert: DR.S.Lalan

The committee has discussed about the course and is approved.

S. Latha V.S.K

Dean Subject Expert HOD

OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.

[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P-II) dt. 11/07/2011]
[Affiliated to Bharath University, Chennai - TN]

Circular

10/ 09/17

Sub: Organising Value-added Course: Basic course in Research-an integral part of medical education - reg

With reference to the above mentioned subject, it is to bring to your notice that **SLIMS, Bharath Institute of Higher Education and Research**, is organizing "Basic course in Research-an integral part of medical education". The course content and registration form is enclosed below."

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before Oct 2017. Applications received after the mentioned date shall not be entertained under any circumstances.

Dean

DEAN
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE
KUDAPAKKAM POST,
PUDUCHERRY - 605 502

Encl: Copy of Course content and Registration form.

VALUE ADDED COURSE

1. Name of the programme & Code

Basic course in Research-an integral part of medical education PHYC05

2. Duration & Period

30 hrs & Nov 2017– Jan 2018

3. Information Brochure and Course Content of Value Added Courses

Enclosed as Annexure- I

4. List of students enrolled

Enclosed as Annexure- II

5. Assessment procedures:

Descriptive questions- *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

7. No. of times offered during the same year:

1 Nov 2017– Jan 2018

8. Year of discontinuation: 2018

9. Summary report of each program year-wise

Value Added Course- Nov 2017– Jan 2018

Sl. No	Course Code	Course Name	Resource Persons	Target Students	Strength & Year
1	PHYC 05	Basic course in Research-an integral part of medical education	Dr. S.Latha	1st MBBS	20 (Nov 2017– Jan 2018)

10. Course Feed Back

Enclosed as Annexure- V

S. Latha

RESOURCE PERSON

COORDINATOR

Annexure -I

COURSE PROPOSAL

Course Title: Basic course in Research-an integral part of medical education

Course Objective: The main objectives of this course are to make understand the ug students about research, and their importance in in medical education and how to design and collect data etc

Course Outcome: On successful completion of the course the students will acquire adequate knowledge on research and its importance in medical education

Course Audience: Ist MBBS students

Course Coordinator: DR.R.Vijayakumar

Course Faculties with Qualification and Designation:

1. **DR.S.Latha, Ph.D, Asst. Professor**
2. **DR.Anebaracy, MD. Assistant professor**
3. **DR.B.Deivanayagame, MD, Assistant professor**

Course Curriculum/Topics with schedule (Min of 30 hours)

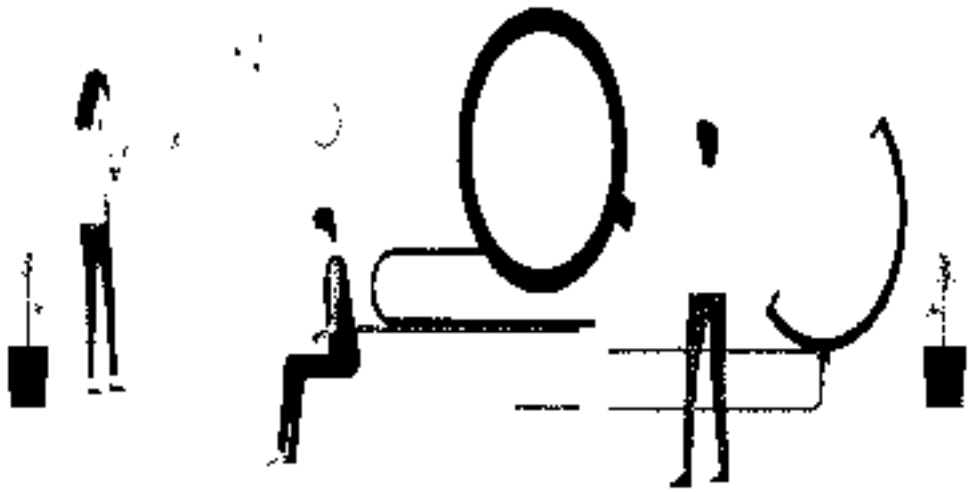
S. No	Date	Topic	Time	Hours
1.	11/11/17	Introduction of Research	2-4pm	2
2	18/11/17	Different types of research	2-4pm	2
3	25/11/17	Value of health research	2-4pm	2
4	02/12/17	Importance of research in Ug level	2-4pm	2
5	09/12/17	Research registries	2-5pm	3
6	16/12/17	How to design a research	2-5pm	3
7	23/12/17	Where to get ethical permission	2-4pm	2
8	30/12/17	Literature collection	2-5pm	3
9	06/01/18	Methodology and collection of the sample	2-5pm	3

10	13/01/18	Sample analysis	2-4pm	2
11	20/01/18	Statistical analysis	2-5pm	3
10	27/01/18	Assessment	2-5pm	3
			Total Hours	30

REFERENCE BOOKS:

1. Research Methodology: A Step-by-Step Guide for Beginners -Dr. Ranjit Kumar
2. Research Methods: A Practical Guide For Students And Researchers-Willie Tan

BASIC COURSE IN RESEARCH-AN INTEGRAL PART OF MEDICAL EDUCATION



PARTICIPANT HAND BOOK

COURSE DETAILS

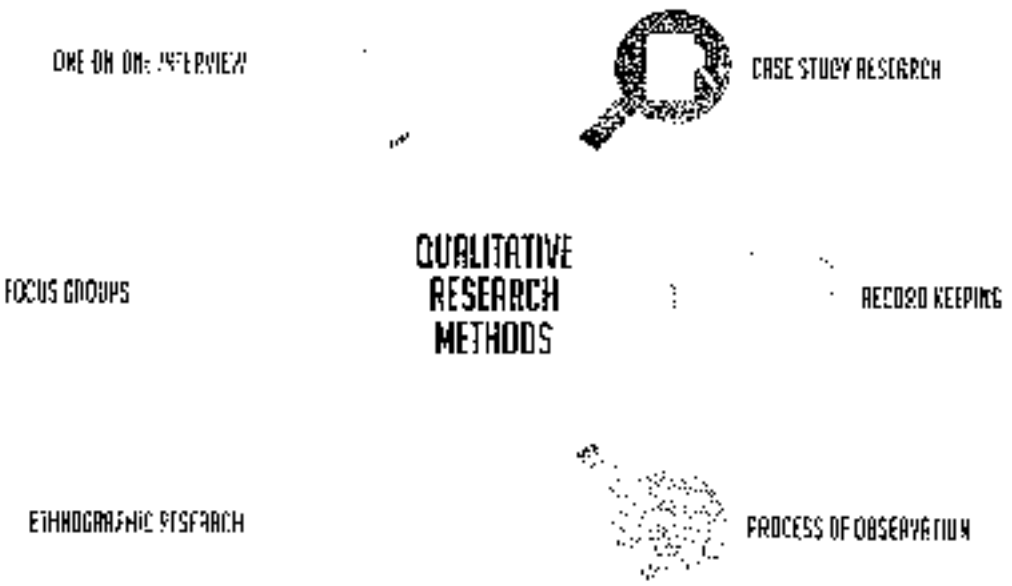
Particulars	Description
Course Title	Basic course in Research-an integral part of medical education
Course Code	PHYC05
Objectives	The main objectives of this course are to make understand the ug students about research, and their importance in in medical education and how to design and collect data etc.
Target students	1st MBBS Students
Key competencies	1. What is research 2.Different types of research 3. Value of health research 4. Importance of research in ug level 5. Research registries 5. How to design a research 6. Where to get ethical permission 7. Literature collection 8. Methodology and collection of the sample 9. Sample analysis 10.Statistical analysis
Duration	30hrs . Nov 2017– Jan 2018
Assessment Procedure	Descriptive questions based assessment

What is research:

Research is "creative and systematic work undertaken to increase the stock of knowledge". It involves the collection, organization, and analysis of information to increase understanding of a topic or issue. A research project may be an expansion on past work in the field.

The primary purposes of basic research (as opposed to applied research) are documentation, discovery, interpretation, and the research and development (R&D) of methods and systems for the advancement of human knowledge. Approaches to research depend on epistemologies, which vary considerably both within and between humanities and sciences. There are several forms of research: scientific, humanities, artistic, economic, social, business, marketing, practitioner research, life, technological, etc. The scientific study of research practices is known as meta-research.

Different types of research



Forms of research

Original research, also called primary research, is research that is not exclusively based on a summary, review, or synthesis of earlier publications on the subject of research. This material is of a primary-source character. The purpose of the original research is to produce new knowledge, rather than to present the existing knowledge in a new form (e.g., summarized or classified). Original research can take a number of forms, depending on the discipline it pertains to. In experimental work, it typically involves direct or indirect observation of the researched subject(s), e.g., in the laboratory or in the field, documents the methodology, results, and conclusions of an experiment or set of experiments, or offers a novel interpretation of previous results. In analytical work, there are typically some new (for example) mathematical results produced, or a new way of approaching an existing problem. In some subjects which do not typically carry out experimentation or analysis of this kind, the originality is in the particular way existing understanding is changed or re-interpreted based on the outcome of the work of the researcher.

The degree of originality of the research is among major criteria for articles to be published in academic journals and usually established by means of peer review. Graduate students are commonly required to perform original research as part of a dissertation.

Scientific research is a systematic way of gathering data and harnessing curiosity. This research provides scientific information and theories for the explanation of the nature and the properties of the world. It makes practical applications possible. Scientific research is funded by public authorities, by charitable organizations and by private groups, including many companies. Scientific research can be subdivided into different classifications according to their academic and application disciplines. Scientific research is a widely used criterion for judging the standing of an academic institution, but some argue that such is an inaccurate assessment of the institution, because the quality of research does not tell about the quality of teaching (these do not necessarily correlate).

Research in the humanities involves different methods such as for example hermeneutics and semiotics. Humanities scholars usually do not search for the ultimate correct answer to a question, but instead, explore the issues and details that surround it. Context is always important, and context can be social, historical, political, cultural, or ethnic. An example of research in the humanities is historical research, which is embodied in historical method. Historians use primary sources and other evidence to systematically investigate a topic, and then to write histories in the form of accounts of the past. Other studies aim to merely examine the occurrence of behaviours in societies and communities, without particularly looking for reasons or motivations to explain these. These studies may be qualitative or quantitative, and can use a variety of approaches, such as queer theory or feminist theory.

Artistic research, also seen as 'practice-based research', can take form when creative works are considered both the research and the object of research itself. It is the debatable body of thought which offers an alternative to purely scientific methods in research in its search for knowledge and truth.

Importance of health research

health research has high value to society. It can provide important information about disease trends and risk factors, outcomes of treatment or public health interventions, functional abilities, patterns of care, and health care costs and use. The different approaches to research provide complementary insights. Clinical trials can provide important information about the efficacy and adverse effects of medical interventions by controlling the variables that could impact the

results of the study, but feedback from real-world clinical experience is also crucial for comparing and improving the use of drugs, vaccines, medical devices, and diagnostics. For example, Food and Drug Administration (FDA) approval of a drug for a particular indication is based on a series of controlled clinical trials, often with a few hundred to a few thousand patients, but after approval it may be used by millions of people in many different contexts. Therefore, tracking clinical experience with the drug is important for identifying relatively rare adverse effects and for determining the effectiveness in different populations or in various circumstances. It is also vital to record and assess experience in clinical practice in order to develop guidelines for best practices and to ensure high-quality patient care. Collectively, these forms of health research have led to significant discoveries, the development of new therapies, and a "remarkable improvement in health care and public health.[4] Economists have found that medical research can have an enormous impact on human health and longevity, and that the resulting increased productivity of the population contributes greatly to the national economy in addition to the individual benefits of improved health. If the research enterprise is impeded, or if it is less robust, important societal interests are affected.

RESEARCH FOR MEDICAL STUDENTS

Many medical students do not see themselves having a career that emphasizes research. The question is should students be consumers of the products of scientific research only or should they be conducting their own research? Medical students are already busy as it is. Should they burden themselves with doing research as well? The answer is yes, medical students should and must engage in research as part of their studies and here are some of the reasons why:

1. Research experience in medical school is increasingly becoming an important factor when it comes to obtaining training positions post-graduate. Competition for such training positions are very fierce and having research experience is a distinct advantage.
2. Research training could also be the first time that students get to write what they think and do so in a coherent and concise manner. This contributes to the development of habits that are crucial in a medical career.

3. Doing research while in medical school can also encourage the production of papers and research later on. This can help in boosting careers.
4. It also appears that research-active physicians provide better care to patients.
5. Medical doctors must understand and appreciate the research process. They must be able to critically appraise the literature. This is very important today, since patients get all kinds of information through the Internet and when there are so many articles out there, and the majority of them are published without checking for quality and legitimacy, just for money. Doctors must know what is legitimate and what is not, because the patient will ask about things he read in the newspapers, or in journals, or found on the Internet. Given all these benefits, it really is obvious that research is very important for medical students.

Research Registries

One way to make information about research studies more broadly available to the public is through registration of trials and other studies in public databases. HHS should encourage such registration of trials and other studies, particularly when research is conducted with an IRB/Privacy Board approved waiver of consent or authorization. Numerous clinical trial registries already exist, and registration has increased in recent years. In 2000, the National Library of Medicine established a clinical trials registry, which has expanded to include information from several other trial registries and to serve as the FDA-required site for submissions about clinical trials subject to the FDA databank requirement. The FDA Amendments Act of 2007 expanded the scope of required registrations at ClinicalTrials.gov and provided the first federally funded trials results database. It mandates registrations of controlled clinical investigations, except for Phase I trials, of drugs, biologics, and devices subject to FDA regulation. A policy of the International Committee of Medical Journal Editors (ICMJE), adopted in fall 2005, also requires prospective trial registration as a precondition for publication. This policy led to a 73 percent increase in trial registrations of all intervention types from around the world. Nearly 45,000 trials had been registered by fall 2007.However, although the development of such registries is an important first step toward providing high-quality clinical trial information to the public, no centralized system currently exists to disseminate

information about clinical trials of drugs or other interventions, making it difficult for consumers and their health care providers to identify ongoing studies. The current statutory requirements for registration and data reporting in the United States are not as broad as the transnational policies of the ICMJE or the World Health Organization, which call for the registration of all interventional studies in human beings regardless of intervention type. Moreover, noninterventional studies, such as observational studies that play an increasingly critical role in biomedical research, are not generally included in these databases. Because many noninterventional studies are conducted with an IRB/Privacy Board approved waiver of consent or authorization, including those studies in a registry could be an important method for increasing public knowledge of such studies.

Statistical analysis:

Statistical analysis is the process of collecting and analyzing samples of data to uncover patterns and trends and predict what could happen next to make better and more scientific decisions.

The 5 methods for performing statistical analysis

1. Mean

The first method that's used to perform the statistical analysis is mean, which is more commonly referred to as the average. When you're looking to calculate the mean, you add up a list of numbers and then divide that number by the items on the list.

When this method is used it allows for determining the overall trend of a data set, as well as the ability to obtain a fast and concise view of the data. Users of this method also benefit from the simplistic and quick calculation.

The statistical mean is coming up with the central point of the data that's being processed. The result is referred to as the mean of the data provided. In real life, people typically use mean to in regards to research, academics, and sports. Think of how many times a player's batting average is discussed in baseball; that's their mean.

How to find the mean

To find the mean of your data, you would first add the numbers together, and then divide the sum by how many numbers are within the dataset or list.

As an example, to find the mean of 6, 18, and 24, you would first add them together.

6 + 18 + 24 = 48

Then, divide by how many numbers in the list (3).

48 / 3 = 16

The mean is 16.

Disadvantages

When using mean is great, it's not recommended as a standalone statistical analysis method. This is because doing so can potentially ruin the complete efforts behind the calculation, seeing as it is also related to the mode (the value that occurs most often) and median (the middle) in some data sets. When you're dealing with a large number of data points with either a high number of outliers (a data point that differs significantly from others) or an inaccurate distribution of data, the mean doesn't give the most accurate results in statistical analytics for a specific decision.

2. Standard deviation

Standard deviation is a method of statistical analysis that measures the spread of data around the mean.

When you're dealing with a high standard deviation, this points to data that's spread widely from the mean. Similarly, a low deviation shows that most data is in line with the mean and can also be called the expected value of a set.

Standard deviation is mainly used when you need to determine the dispersion of data points (whether or not they're clustered).

If a low standard deviation occurs, it would show that the answers can be projected to a larger group of customers.

How to find the standard deviation

The formula to calculate the standard deviation is:

$\sigma 2 = \Sigma(x - \mu)2/n$

In this formula:

- The symbol for standard deviation is σ
- Σ stands for the sum of the data
- x stands for the value of the dataset
- μ stands for the mean of the data
- σ2 stands for the variance
- n stands for the number of data points in the population

To find the standard deviation:

1. Find the mean of the numbers within the data set
2. For each number within the data set, subtract the mean and square the result (which is this part of the formula (x − μ)2).
3. Find the mean of those squared differences
4. Take the square root of the final answer

If you used the same three numbers in our mean example, 6, 18, and 24, the standard deviation, or σ, would be 7.4833147735479.

Disadvantages:

On a similar note to the downside of using mean, the standard deviation can be misleading when used as the only method in your statistical analysis.

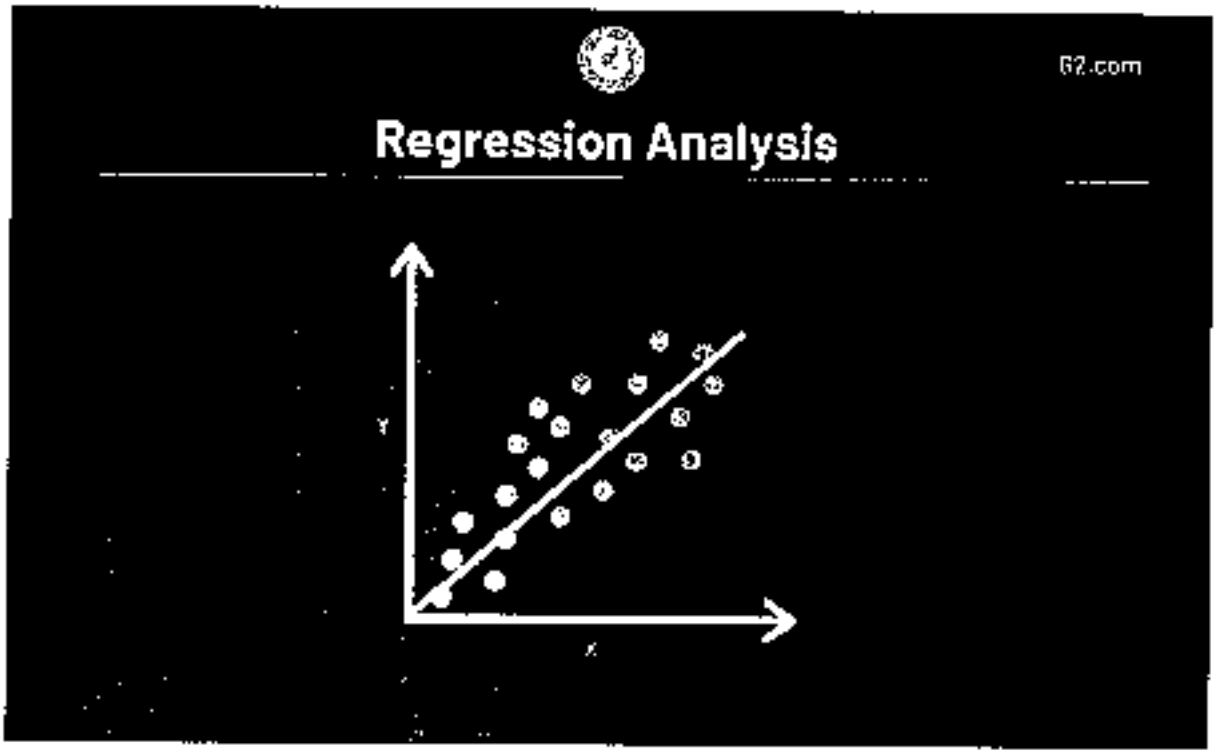
As an example, if the data you're working with has too many outliers or a strange pattern like a non-normal curve, then standard deviation won't provide the necessary information to make an informed decision.

3. Regression

When it comes to statistics, **regression** is the relationship between a dependent variable (the data you're looking to measure) and an independent variable (the data used to predict the dependent variable).

It can also be explained by how one variable affects another, or changes in a variable that trigger changes in another, essentially cause and effect. It implies that the outcome is dependent on one or more variables.

The line used in regression analysis graphs and charts signify whether the relationships between the variables are strong or weak. in addition to showing trends over a specific amount of time.



These studies are used in statistical analysis to make predictions and **forecast trends.** For example, you may use regression to predict how a specific product or service may sell to your customers. Or, here at G?, we use regression to predict how our organic traffic will look 6 months from now.

Regression formula

The regression formula that's used to see how data could look in the future is:

$Y = a - b(x)$

In this formula:

- A refers to the y-intercept, the value of y when x – 0
- X is the dependent variable
- Y is the independent variable
- B refers to the slope, or rise over run

Disadvantages

One disadvantage of using regression as part of your statistical analysis is that regression isn't very distinctive, meaning that although the outliers on a scatter plot (or regression analysis

graph) are important, so are the reasons as to why they're outliers. This reason could be anything from an error in analysis to data being inappropriately scaled.

A data point that is marked as an outlier can represent many things, such as your highest selling product. The regression line entices you to ignore these outliers and only see the trends in data.

4. Hypothesis testing

In statistical analysis, hypothesis testing, also known as "T Testing", is a key to testing the two sets of random variables within the data set.

This method is all about testing if a certain argument or conclusion is true for the data set. It allows for comparing the data against various hypotheses and assumptions. It can also assist in forecasting how decisions made could affect the business.

In statistics, a hypothesis test determines some quantity under a given assumption. The result of the test interprets whether the assumption holds or whether the assumption has been violated. This assumption is referred to as the *null hypothesis*, or hypothesis 0. Any other hypothesis that would be in violation of hypothesis 0 is called the first hypothesis, or hypothesis 1.

When you conduct hypothesis testing, the results of the test are significant to statistics if the results are proof that it couldn't have happened by a random occurrence or chance.

As an example, you may make the assumption that the longer it takes to develop a product, the more successful it will be, resulting in higher sales than ever before. Before implementing longer work hours to develop a product, hypothesis testing ensures there's an actual connection between the two.

Hypothesis testing formula

The results of a statistical hypothesis test need to be interpreted to make a specific claim, which is referred to as the p-value.

Let's say what you're looking to determine has a 50% chance of being correct.

The formula for this hypothesis test is:

$H0: P = 0.5$

$H1: P \neq 0.5$

Disadvantages

Hypothesis testing can sometimes be clouded and skewed by common errors, like the placebo effect. This occurs when statistical analysts conducting the test falsely expect a certain result and then see that result, no matter the circumstances.

There's also the likelihood of being skewed by the Hawthorne effect, otherwise known as the observer effect. This happens when participants being analyzed skew the results because they know they're being studied.

5.Sample size determination

When it comes to analyzing data for statistical analysis, sometimes the dataset is simply too large, making it difficult to collect accurate data for each element of the dataset. When this is the case, most go the route of analyzing a sample size, or smaller size, of data, which is called sample size determination.

To do this correctly, you'll need to determine the right size of the sample to be accurate. If the sample size is too small, you won't have valid results at the end of your analysis.

To come to this conclusion, you'll use one of the many **data sampling** methods. You could do this by sending out a survey to your customers, and then use the simple random sampling method to choose the customer data to be analyzed at random.

On the other hand, a sample size that is too large can result in wasted time and money. To determine the sample size, you may examine aspects like cost, time, or the convenience of collecting data.

Finding a sample size

Unlike the other four statistical analysis methods, there isn't one hard-and-fast formula to use to find the sample size.

However, there are some general tips to keep in mind when determining a sample size:

1. When considering a smaller sample size, conduct a **census**
2. Use a sample size from a study similar to your own. For this, you may want to consider taking a look at academic databases to search for a similar study
3. If you're conducting a generic study, there may be a table that already exists that you can use to your advantage
4. Use a **sample size calculator**

5. Just because there isn't *one* specific formula doesn't mean you won't be able to find a formula that works. There are many you could use, and it depends on what you know or don't know about the purposed sample. Some that you may consider using are **Slovin's formula** and Cochran's formula

The downside

As you analyze a new and untested variable of data within this method, you'll need to rely on certain assumptions. Doing so could result in a completely inaccurate assumption. If this error occurs during this statistical analysis method, it can negatively affect the rest of your data analysis.

These errors are called sampling errors and are measured by a confidence interval. For instance, if you state that your results are at a 90% confidence level, it means if you were to perform the same analysis again and again, 90% of the time your results will be the same.

Ethical Issues in Research

There are many organizations, like the Committee on Publication Ethics, dedicated to promoting ethics in scientific research. These organizations agree that ethics is not an afterthought or side note to the research study. It is an integral aspect of research that needs to remain at the forefront of our work

- Validity

The research design must address specific research questions. Hence, the conclusions of the study must correlate to the questions posed and the results. Also, research ethics demands that the methods used must relate specifically to the research questions.

- Voluntary Participation and Consent

An individual should at no point feel any coercion to participate in a study. This includes any type of persuasion or deception in attempting to gain an individual's trust.

Informed consent states that an individual must give their explicit consent to participate in the study. You can think of consent form as an agreement of trust between the researcher and the participants.

- Sampling

Sampling is the first step in research design. You will need to explain why you want a particular group of participants. You will have to explain why you left out certain people or groups. In

addition, if your sample includes children or special needs individuals, you will have additional requirements to address like parental permission.

- Confidentiality

The third ethics principle of the Economic and Social Research Council (ESRC) states that: "The confidentiality of the information supplied by research subjects and the anonymity of respondents must be respected." However, sometimes confidentiality is limited. For example, if a participant is at risk of harm, we must protect them. This might require releasing confidential information.

- Risk of Harm

We should do everything in our power to protect study participants. For this, we should focus on the risk to benefit ratio. If possible risks outweigh the benefits, then we should abandon or redesign the study. Risk of harm also requires us to measure the risk to benefit ratio as the study progresses.

- Research Methods

We know there are numerous research methods. However, when it comes to ethical considerations, some key questions can help us find the right approach for our studies.

i. Which methods most effectively fit the aims of your research?

ii. What are the strengths and restrictions of a particular method?

iii. Are there potential risks when using a particular research method?

For more guidance, you can refer to the ESRC Framework for Research Ethics.

Institutional Review Boards

The importance of ethics in research cannot be understated. Following ethical guidelines will ensure your study's validity and promote its contribution to scientific study. On a personal level, you will strengthen your research and increase your opportunities to gain funding.

To address the need for ethical considerations, most institutions have their own Institutional Review Board (IRB). An IRB secures the safety of human participants and prevents violation of human rights. It reviews the research aims and methodologies to ensure ethical practices are followed. If a research design does not follow the set ethical guidelines, then the researcher will have to amend their study.

Applying for Ethical Approval

Applications for ethical approval will differ across institutions. Regardless, they focus on the benefits of your research and the risk to benefit ratio concerning participants. Therefore, you need to effectively address both in order to get ethical clearence.

- Participants

It is vital that you make it clear that individuals are provided with sufficient information in order to make an informed decision on their participation. In addition, you need to demonstrate that the ethical issues of consent, risk of harm, and confidentiality are clearly defined.

- Benefits of the Study

You need to prove to the panel that your work is essential and will yield results that contribute to the scientific community. For this, you should demonstrate the following:

i. The conduct of research guarantees the quality and integrity of results.

ii. The research will be properly distributed.

iii. The aims of the research are clear and the methodology is appropriate.

- Integrity

Integrity and transparency are vital in the research. Ethics committees expect you to share any actual or potential conflicts of interest that could affect your work. In addition, you have to be honest and transparent throughout the approval process and the research process.

The Dangers of Unethical Practices

There is a reason to follow ethical guidelines. Without these guidelines, our research will suffer. Moreover, more importantly, people could suffer.

The following are just two examples of infamous cases of unethical research practices that demonstrate the importance of adhering to ethical standards:

- The Stanford Prison Experiment (1971) aimed to investigate the psychological effects of power using the relationship between prisoners and prison officers. Those assigned the role of "prison officers" embraced measures that exposed "prisoners" to psychological and physical harm. In this case, there was voluntary participation. However, there was disregard for welfare of the participants.
- Recently, Chinese scientist He Jiankui announced his work on genetically edited babies. Over 100 Chinese scientists denounced this research, calling it "crazy" and "shocking and unacceptable." This research shows a troubling attitude of "do first, debate later" and

a disregard for the ethical concerns of manipulating the human body Wang Yuedan, a professor of immunology at Peking University, calls this "an ethics disaster for the world" and demands strict punishments for this type of ethics violation.

What are your experiences with research ethics? How have you developed an ethical approach to research design? Please share your thoughts with us in the comments section below.

Assessment Procedure

Descriptive questions-based assessment after successful completion of theory session

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Annexure -III

Basic course in Research-an integral part of medical education PHYC05

DESCRIPTIVE QUESTIONS

Course Code: PHYC 05

1. ANSWER ALL THE QUESTIONS $5 \times 10 = 50$

1. What is research and write Different types of research
2. Write the Importance of research
3. Write about Research registries
4. Where to get ethical permission
5. Give in detail about statistical analysis

Bharath Institute of Higher Education and Research

Annexure -II

SIJMS Participant list of Value-added course: Basic course in Research-an integral part of medical education

Nov 2017– Jan 2018

Sl.No	Reg.No	Name of the candidate	Signature
1	U17MB291	DISHAL K P	
2	U17MB292	DIVYA PRIYA K	
3	U17MB293	DIVYANSHI SINGH	
4	U17MB294	ELAKIYA BALA	
5	U17MB295	FEMI SREE.R.A.	
6	U17MB296	GANJI KARTHIK	
7	U17MB297	GAUTHAMAN.M	
8	U17MB298	GOKULAVAANI G K	
9	U17MB299	GOWTHAM BJ	
10	U17MB300	GRANDHI KARISHMA	
11	U17MB301	GREESHMA SHAJI .K	
12	U17MB302	GUDDATI KOTA SATYA SAI NAGA S RAMESH	
13	U17MB303	GURUNATHAN S	
14	U17MB304	HARSH BHARTI	
15	U17MB305	HENRITTA J	
16	U17MB306	HIYA SAIKIA	
17	U17MB307	HRITHICK MANICKAM R	
18	U17MB308	JAYASHREE SAIKIA	
19	U17MB309	JITHU MOHAN	
20	U17MB310	KAILA PRASANTH KUMAR	

Annexure -V

Course/Training Feedback Form

Course: Basic course in Research-an integral part of medical education
Date: Nov 2017 -Jan 2018
Name:
Reg NO.
Department: Physiology

Q 1: Please rate your overall satisfaction with the format of the course

a. Excellent b. Very Good c. Satisfactory d. unsatisfactory

Q 2: Please rate course notes

a. Excellent b. Very Good c. Satisfactory d. unsatisfactory

Q 3: The lecture sequence was well planned

a. Excellent b. Very Good c. Satisfactory d. unsatisfactory

Q 4: The lectures were clear and easy to understand

a. Excellent b. Very Good c. Satisfactory d. unsatisfactory

Q 5: Please rate the quality of pre-course administration and information:

a. Excellent b. Very Good c. Satisfactory d. unsatisfactory

Q 6: Any other suggestions:

Comments:

Thank you for taking the time to complete this survey, your comments are much appreciated

OPTIONAL Section: Name ____________________
Signature ____________ Date __________

Date:30.1.18

From
DR.V.Senthil kumar
Dept.of physiology
SLIMS
Bharath Institute of Higher Education and Research,
Chennai.

Through Proper Channel

To
The Dean,
SLIMS
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Completion of value-added course: Basic course in Research-an integral part of medical education

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: Basic course in Research-an integral part of medical education on Nov2017– Jan 2018. We solicit your kind action to send certificates for the participants, that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course

Kind Regards

DR.V.Senthil kumar

[illegible] Sign and Seal [illegible]

Encl: Certificates

Photographs

Sri Lakshmi Narayana Institute of Medical Sciences

CERTIFICATE OF MERIT

This is to certify that GIRNSI KARTHIK has actively participated in the Value Added Course on Basic course in Research-an integral part of medical education held during Nov 2017- Jan 2018 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

S. Latha

Dr. S.Latha

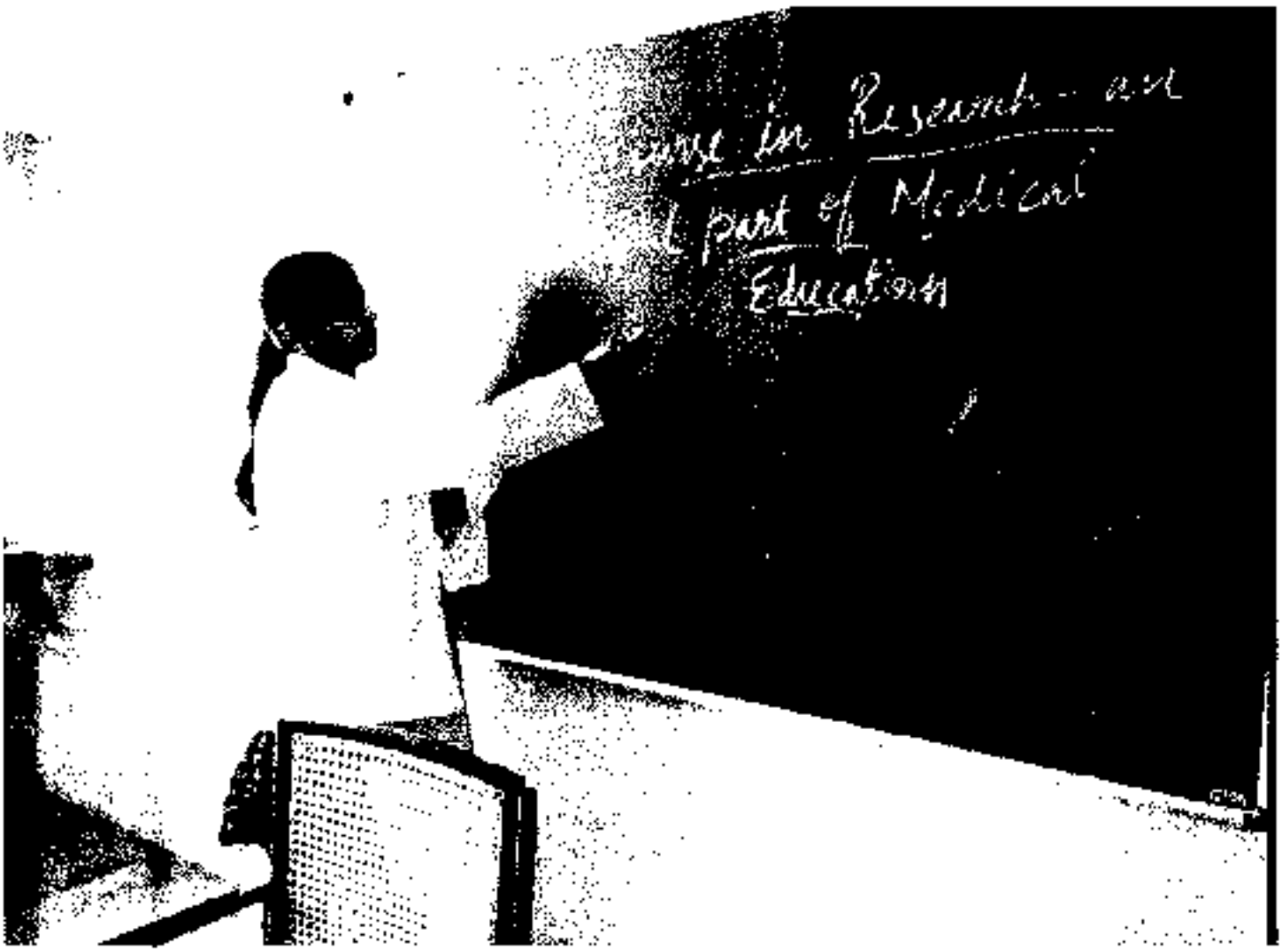
RESOURCE PERSON

Dr. R.Vijaya kumar

COORDINATOR

Course: Basic course in Research-an integral part of medical education

Code: PHYC05



D. NO.	

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Total Number of pages written including additional sheets

BHARATH UNIVERSITY

(Declared under Section 3 of the UGC Act 1956)
CHENNAI - 600 073

MAIN ANSWER BOOK

NAME OF THE EXAMINATION : Master Dental courses

SUBJECT OF THE EXAMINATION : Human Physiology

SECTION I code : PHG 05

DATE OF THE EXAMINATION : 27.1.13

QUESTION NUMBERS / MARKS

Section						Sub Total
A	1	2				
B	a	b	c	d	e	
	f	g	h	i	j	
C	a	b	c	d	e	
	f	g	h	i	j	
					TOTAL	

Total Marks in words .....

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BUNDLE No.

Signature of the Examiner .....

CANDIDATES TO FILL THIS COLUMN CAREFULLY

REG. NO.	07/MB296

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D. NO.	

PAGE No.

What is Research.

Research is creative and systematic work undertaken to increase the stock of knowledge. It involves collection, organization and analysis of information to increase understanding of topic.

A research project is an expansion on past work in the field.

The primary purpose of basic research are documentation, discovery, interpretation and the research and development of methods and systems for the advancement of human knowledge.

There are several forms of research - scientific, humanities, artistic, economic, social, business, marketing, practitioner research, life technologies etc

Different types of Research.

-> One on one interview
-> Case Study research
-> Record keeping
-> Proof of observation
-> Ethnographic research
-> Focus groups

Primary or original Research

The purpose of original research is to produce new knowledge rather than to present the existing knowledge in a new form.

In the experimental work it involves direct or indirect observation of researched subject.

Research in human involves different methods such as Yes

Different Types of Research.

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Research on human involves different methods such as focus

interventional studies in human beings regardless of intervention type.

IRB/privacy board approved waivers of consent or authorization including chart studies as a registry could be an important method for increasing public knowledge of such studies.

2 Ethical Determination

Importance of Research.

Health research has high value to society. It can provide important information about disease trends and risk factors. Outcomes of treatment or public health intervention, functional abilities, pattern of care and health care costs and use.

The FDA amendment act of 2007 expanded the scope required registration of clinical Trials. gov. and provided the first federally funded trials results database.

A policy of International committee of Medical journal Editors (ICMJE), adopted in fall 2005, also requires prospective trial registration as a precondition for publication. This policy led to a 73% rise in trial registration of all intervention types from around the world.

World health organization which call for the registration of all

examples, chronicles and anecdotes.

Historians use primary sources and other evidence to systematically investigate a topic and then to write, distorted in the form of accounts of the past.

Artistic also seen as practice based research. One take-from when creative works are considered both the research and the object of research itself. It is the debatable body of thought which offers an alternative to purely scientific methods in research in its search for knowledge and truth.

3 Research Registries -

One way to make information about research studies more broadly available to the public is through registration of trials and other studies in public databases

NIES should encourage such registration of trials and other studies, particularly when research is conducted with an IRB / privacy board approved waiver of consent or authorization

Numerous clinical trial registries exist and registration has increased in recent years.

The national library of Medicine established a clinical trials registry

The different approaches to research provide complementary insights
clinical trials can provide important
information about the efficacy and
adverse effects of medical interventions
by controlling the variable that.
could impact the result of study.
but feedback from the real-world
clinical experience is also crucial for
comparing and improving the use
of drugs, vaccines, medical devices
and diagnostics.

tracking clinical experience with
the drug is important for identifying
relatively rare adverse effects and
for determining the effectiveness in
different populations,

5) Statistical analysis

5 methods

1. Mean

Commonly known as average

When this method is used, it allows for determining the overall trend of a data set as well as the ability to obtain a fast and concise view of the data.

To find the mean we have to add the numbers together and then divide the sum by how many numbers are within data set or list.

2. Standard deviation;

Standard deviation mainly used when you need to determine the dispersion of data points.

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formula to calculate the
Standard deviation is.

$$\Sigma (x-u)^2/n$$

3) Regression

It is the relationship between a dependent variable and an independent variable.

Regression formula

$$Y = a + b(x)$$

a : Y intercept

b : Slope

x is dependent variable

Y → independent variable

4) Hypothesis testing

It is also known as T-Testing.

It statistics hypotheses that determine is generally under a given assumption.

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The result of the test interpretation whether the assumption holds or whether the assumption has been violated.

This assumption is termed as null hypothesis.

Hypothesis testing formula

$p = 0.5$

$p \neq 0.5$

5) Sample size determination

determined by using Sample size calculator.