



# 14<sup>th</sup> Annual One-week Course on Health Research Methodology & Evidence Based Medicine

St. John's Medical College & Research Institute, Bangalore, India  
In Collaboration with faculty from  
McMaster University, Canada.

13<sup>th</sup>- 17<sup>th</sup> March 2023

## COURSE REPORT



103 participants; 11 faculty members

Designed and Conducted by

Division of Clinical Research and Training, and  
Department of Pharmacology  
St. John's Medical College & Research Institute,  
Bangalore

**Course Director:**  
Dr. Denis Xavier  
MD., MSc. (Clin Epi)

**Organising Team:**  
Dr. Atiya Faruqui  
Dr. Aakanksha Singh  
Ms. Jayalakshmi AH  
Mr. Deepak P

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## **Background and Inauguration**

St. John's Medical College and Research Institute, Bangalore in association with the Population Health Research Institute, McMaster University, Canada, has been conducting short term courses on health research methods since 2009. We started with a NIH grant in 2009 for 5 years and continued thereafter. In the last 14 years we have trained over 2000 health professionals from 83 institutions in 45 cities across 12 countries.

We are delighted to present a brief report on our annual one-week course on Health Research Methodology & Evidence Based Medicine conducted from March 13<sup>th</sup> to 17<sup>th</sup>, 2023. The Karnataka Medical Council accredited and awarded 6 credit points for the participants & the faculty.

The inaugural function was held on 13th March. It was attended by Rev. Dr. Paul Parathazham, Director of St. John's National Academy of Health Sciences, Rev. Fr Dr. Charles Davis, Associate Director, St. John's Medical College, and Dr. Tony DS Raj, Dean of Research Institute, special guests, faculty, staff & students.



**Inaugural Function**



**Rev. Dr. Paul Parathazham, Director  
St. John's National Academy of Health Sciences**



**Rev. Fr Dr. Charles Davis, Associate Director  
St. John's Medical College**



**Dr. Tony DS Raj,  
Dean, St. John's Research Institute**



**Dr. Denis Xavier, Course Director  
Head, Division of Clinical Research & Training, SJRI**

### Objectives of the course:

- To familiarize a wide range of health professionals in fundamentals of health research methods, and in evidence based medicine.
- To provide an opportunity to interact with like-minded professionals from varied health fields and to explore collaborations.

### Participants:

The course has been designed for faculty, postgraduate and PhD students from medical, dental, nursing and pharmacy colleges, ethics committee members, regulators, librarians and health policy makers. We had 103 participants from 65 institutes who represented 38 cities from India and Sri Lanka.



### Faculty:

The faculty were from St. John's Medical College and St. John's Research Institute, Bangalore, AIIMS, Bhopal, AIIMS, Nagpur, Public Health Foundation of India, New Delhi & McMaster University, Canada.

<b>McMaster University, Canada</b> Dr. Gordon Guyatt Dr. P J Devereaux	<b>St. John's Medical College, Bangalore</b> Dr. Deepak Kamath Dr. Denis Xavier Dr. Girish Narayan Dr. AR Ramesh Dr. Tinku Thomas
<b>AIIMS, Bhopal</b> Dr. Rajnish Joshi	<b>St. John's Research Institute, Bangalore</b> Dr. Prem Pais
<b>AIIMS, Nagpur</b> Dr. Prashant P Joshi	<b>Public Health Foundation of India, New Delhi</b> Dr. Prabhakaran Dorairaj

## Course methods:

We had 20 interactive lectures, 4 small group protocol discussions, 4 journal clubs and 4 project presentations. There were 14 lectures on health research methods, 4 on statistics and 2 on project management. The topics were on study design and methods, ethics, grants and publications, project & data management, evidence based medicine, real world evidence and statistics with interactive practical session in SPSS.

### **Lectures on health research methods included:**

1	Introduction to study designs	6	Knowledge translation and Health Policy
2	Cross-sectional design	7	Systematic Review and Meta-analysis
3	Case control study	8	Qualitative studies
4	Cohort study	9	Ethics in clinical research
5	Randomized Controlled Trials	10	Real World Evidence and Grant Writing

### **Lectures on evidence-based medicine included:**

1	Evidence Based Medicines & Clinical Practice
2	Principles of Evidence Based Medicine

### **Lectures on Statistics included:**

1	Parametric Tests and Non-Parametric Tests	3	Correlation and Regression analysis
2	Sample size	4	Survival Analysis

### **Statistics practical sessions included:**

1. Guided installation of trial version of SPSS
2. Guided hands on training on
  - a. T-tests
  - b. Chi-squared tests
  - c. ANOVA
  - d. Correlation & Regression

Data sets were sent in advance to perform the statistical tests.

### **Lectures on project management included:**

1. Regulatory and Budgets
2. Data Management

The lectures on principles and practice of evidence based medicine (EBM) was by **Dr. Gordon Guyatt and Dr. P J Devereaux from McMaster University, Canada**. The faculty provided an overview of the evolution of EBM, practice of EBM with appropriate examples and the need for collaboration. **Dr. Prabhakaran Dorairaj from PHFI, India**, spoke on the methods of developing health services, rationale of knowledge translation and strategies of working with policy makers.

The **small group activities** included four journal clubs (Registry/Cross sectional study, Case Control, Randomized Controlled Trial and Systematic Review/Meta-analysis) and four project presentations (Registry/Cross sectional study, Case Control, Cohort study and Randomized Controlled Trial).

The **4 Zen protocol sessions** were conducted with discussions between the group members and the faculty on the research question, design, methods, data analysis & budget. The projects developed during the sessions were presented at the end of the course.

The speakers for journal clubs and project presentations were picked up randomly. After the presentations, the full group was invited on stage to answer questions from the audience and faculty.

### Journal Club Presentation: Group Question & Answer Session



Group A



Group B



Group C



Group D

The following were the Journal club articles presented by the groups at the journal club sessions:

Group	Date	Study design	Study title
A	16 <sup>th</sup> Mar	Cross sectional/ registry	Treatment and outcomes of acute coronary syndromes in India ( <b>CREATE</b> ): a prospective analysis of <b>registry</b> data <b>Lancet 2008</b>
B	16 <sup>th</sup> Mar	Systematic Review and Meta-Analysis	Troponin elevations after non-cardiac, non-vascular surgery are predictive of major adverse cardiac events and mortality. <b>BJA 2016</b>
C	16 <sup>th</sup> Mar	Randomized Controlled Trials	Cholesterol Lowering in Intermediate-Risk Persons without Cardiovascular Disease ( <b>HOPE -3</b> ) <b>NEJM 2016</b>
D	16 <sup>th</sup> Mar	Case Control Study	Risk factors for ischemic and intracerebral hemorrhagic stroke in 22 countries (the <b>INTERSTROKE</b> study): a case-control study. <b>Lancet 2010</b>

## Project Presentation: Group Question & Answer Session



Group A



Group B



Group C



Group D

### The following topics were presented for the Group Project:

Group	Date	Study design	Study title
A	17 <sup>th</sup> Mar	Case control	Risk of <b>A</b> utism <b>S</b> pectrum disorder in <b>C</b> hildren of <b>M</b> others with <b>E</b> xposure to antenatal domestic violence: A multicentre case control study (ASC-ME study)
B	17 <sup>th</sup> Mar	Cohort	Neonatal Hypoglycemia and its Neurodevelopmental Outcomes: A prospective cohort study (NEURON)
C	17 <sup>th</sup> Mar	Cross-Sectional	<b>I</b> nternet Addiction and Anxiety <b>D</b> isorders among <b>A</b> dolescents: A <b>PAN-India</b> Community based cross-sectional study (INDIA-PANIC)
D	17 <sup>th</sup> Mar	RCT Design	Effectiveness of <b>C</b> ombined 5- <b>A</b> minolevulinic acid mediated <b>P</b> hotodynamic therapy with <b>N</b> eoadjuvant chemotherapy in locally advanced <b>O</b> ral squamous cell carcinoma (CAPNO Trial)

## Awards to participants

There were 2 categories of awards for the participants

1. Dr. David Sackett Memorial Award
2. Best Research Presentation Group award

### 1. Dr. David Sackett Memorial Award:

The assessment was based on a MCQ based test conducted at the end of the course and their group's performance in Journal Club and Project Presentation.

The top 3 participants were:



**Dr. Lavanya AB, Gynecology oncology  
St John's Medical College and Hospital, Bangalore**



**Dr. Nikhila LN, Community Medicine  
Sree Narayana Institute of Medical Sciences,  
Ernakulam**



**Dr. Varun Kumar Singh, Neurology  
Institute of Medical Sciences BHU, Varanasi**

### 2. Best Research Presentation Group award

Prize for the best group was awarded based on the performance in the journal club and project presentation as well as the individual scores of members in the evaluation. The journal clubs and project presentations were evaluated by 23 Judges who were invited from 12 institutes across India. They evaluated the groups based on knowledge, clarity of presentation, quality of slides and response to the questions. A certificate and a plaque were awarded to all the participants in the winning group.



### Group B- Winners of Best Group

Each group member received a certificate and a plaque with their name engraved.

S.No	Name	Institute
1	Dr. Bharatsing Deorao Rathod	All India Institute of Medical Sciences, Nagpur
2	Dr. Chethan B	Kempegowda Institute of Medical Sciences, Bangalore
3	Dr. Devarapati Mounika Bindu	Government Medical College, Anantapuram
4	Dr. Dishari Chatterjee	College of Medicine & JNM Hospital, Nadia
5	Dr. Gangavarapu Saravana Thanmayi	St. John's Medical College, Bangalore
6	Dr. H E Rama Raju	Vijaynagar Institute of Medical Sciences, Bellari
7	Dr. H M N P Herath	National Hospital, Colombo, Sri Lanka
8	Dr. Jonathan Lourdusamy	Justice K S Hegde Medical Hospital, Mangalore
9	Dr. Kalyan Deepak Sreenivas	All India Institute of Medical Sciences, Mangalagiri
10	Dr. Lakshmi Sangolli	Shri PBM Patil Medical College, Vijayapura
11	Mr Mohammed Ahmed Pasha	Krishna Institute of Medical Sciences, Hyderabad
12	Dr. Nikhila L N	Sree Narayana Institute of Medical Sciences, Ernakulam
13	Dr. Nivedhitha Nikhil	St. John's Medical College, Bangalore
14	Dr. Pasindu Gunatilake	Ministry of Health, Colombo, Sri Lanka
15	Dr. Priyanka P R	Government Medical College, Kannur
16	Dr. Rajashree A N	Dr. B R Ambedkar Medical College, Bangalore
17	Dr. Sebin Jolly	Mysore Medical College and Research Institute, Mysore
18	Dr. Senthilnathan M	JIPMER, Puducherry
19	Dr. Shantipriya Suriseti	Government Medical College, Srikakulam
20	Dr. Shweta S Naik	NIMHANS, Bangalore
21	Dr. Shilpa J	St. John's Medical College and Hospital, Bangalore
22	Dr. Suswetha Naru	Government Medical College, Anantapuram
23	Ms Silvy Abraham	Holy Cross College of Nursing, Kottayam
24	Dr. Sruthi Sreedhaan Nambiar	Kakatiya Medical College, Warangal
25	Dr. Tanvi Joanne Pinto	Seth G S Medical College, Mumbai
26	Dr. Thummapudi Silpa Raj	Government Medical College, Srikakulam

Certificates of CME accreditation and participation were given to candidates who had attended all the sessions.

### **Course Evaluation:**

All participants provided a **structured** as well as an **open evaluation** of different aspects of the course.

The following were the average scores on 5:

<b>Sessions</b>	<b>Score on 5</b>
Lectures	<b>4.6</b>
Journal clubs	<b>4.5</b>
Project presentations	<b>4.7</b>
Zen Protocol	<b>4.7</b>
Statistics Practical	<b>4.4</b>
Time schedule	<b>4.2</b>
<b>Overall</b>	<b>4.5</b>

### **Open / unstructured Feedback**

#### **What participants liked about the course?**

1. Choice of lecturers according to the brochure and course content mentioned in the flyer.
2. To conduct & learn about research work in a systematic manner and progress in academic research work. I had attended the RCT workshop here and was really motivated to continue the learning over and over again.
3. Topics selected & faculty involved from McMaster University, Canada.
4. The very approach of going from basics to advance level and willingness of resource faculty to transfer knowledge.
5. Sessions on Zen protocol, SPSS, sample size calculation, survival analysis, regulatory, budget, adjudication systematic review and qualitative study.
6. Dr. Denis Xavier single handed steered entire course over five days. Really hats off to him, his wisdom and kind-heartedness which he is willing to share.
7. Inspiration to publish research work, collaboration, how to ask questions and give constructive feedback. Overall an excellent introduction course which fulfils its objectives. Apart from the scientific content, hearing about the experience of the faculty in conducting research & learning about effective collaboration with my colleague's sets this course apart from others.
8. Overall best workshop I have attended but I needed more of pre-workshop orientation to utilize more of it. But the organizers and especially Dr. Denis Xavier had been the best educator whose efforts shall not go waste for sure. That's an incredible impact and means a lot to me professionally.

#### **Recommendation for improvement**

1. Hectic Schedule- may increase the days so will have flexible hours.
2. Some sessions can be taken online if course for weeks is difficult. Can't concentrate & retain much after 4 pm.
3. Reduce the number of members per group to include more contribution.
4. Adding faculty from the department of community medicine for more detailed aspects of methodology.
5. Can extend the area of serving food/ dining place.

6. Make the topic more general and include other areas than cardiology.
7. In statistics, help us understand the variables first so as to understand the statistics involved.
8. During presentations, more time should be given to judges than a lot of question from peers.
9. Practical sessions regarding handling missing data and detailed session on sample size calculations.
10. It would be better to include offline speakers rather than online.
11. Have less carbohydrate rich food in the snacks. Too much good food was served making us potential cohort for NCDs.
12. More reading materials- must needed.

### **Valedictory**

The course ended on 17<sup>th</sup> Mar with valedictory function. A valedictory report was presented by the Course Director. Two participants from each group provided feedback on the course. Valedictory function was attended by Rev. Dr. Charles Davis, Associate Director, St. John's Medical College & Dr. Tony D S Raj, Dean of Research Institute, special guests, faculty, staff & students.



**Valedictory report**



**Participants' Feedback**



**Associate Director, SJMC**



**Dean, SJRI**

Awards were announced by the Course Director Dr. Denis Xavier. Plaques and Certificates were handed over to the participants by Associate Director, SJMC & Dean, SJRI.

-----End of Report-----