



13th Annual International One-Week Online 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

21st- 25th February 2022

Course Report



Course Director:

Dr Denis Xavier MD, MSc (Clin Epi)

Organising Committee:

- Dr Padmini Devi
- Dr Aakanksha Singh
- Mr Deepak P
- Ms Jayalakshmi

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Boehringer Ingelheim India Pvt. Ltd.

Designed & Conducted by

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

Background

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. To date we had over 1,858 participants from all regions of India and 11 countries such as United Kingdom, Kenya, Sri Lanka, Australia, Canada, Bangladesh, Tanzania, South Africa, Ethiopia, Cameroon and Nepal.

The 13th Annual International One-Week Course on Health Research Methodology & Evidence Based Medicine was conducted online from February 21st to 25th, 2022.

The Karnataka Medical Council accredited and awarded 3 credit points for participants & faculty.

Inauguration

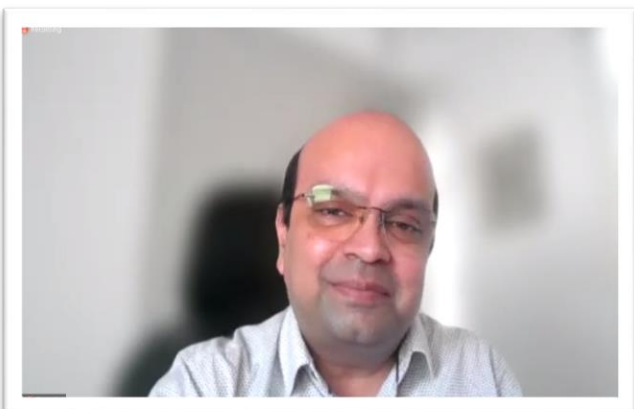
The inaugural function was held on 21st February. Rev. Dr. Paul Parathazham, Director of St. John's National Academy of Health Sciences, Dr. George D'Souza, Dean of St. John's Medical College, Rev. Dr. Charles Davis, Associate Director, St. John's Medical College, and Dr. Tony D S Raj, Dean, St. John's Research Institute welcomed the participants and gave the inaugural message.



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



Dr George D'Souza, Dean, St. John's Medical College



Dr Tony D S Raj, Dean, St. John's Research Institute



Rev. Dr J Charles Davis, Associate Director, SJMC

Objectives of the course:

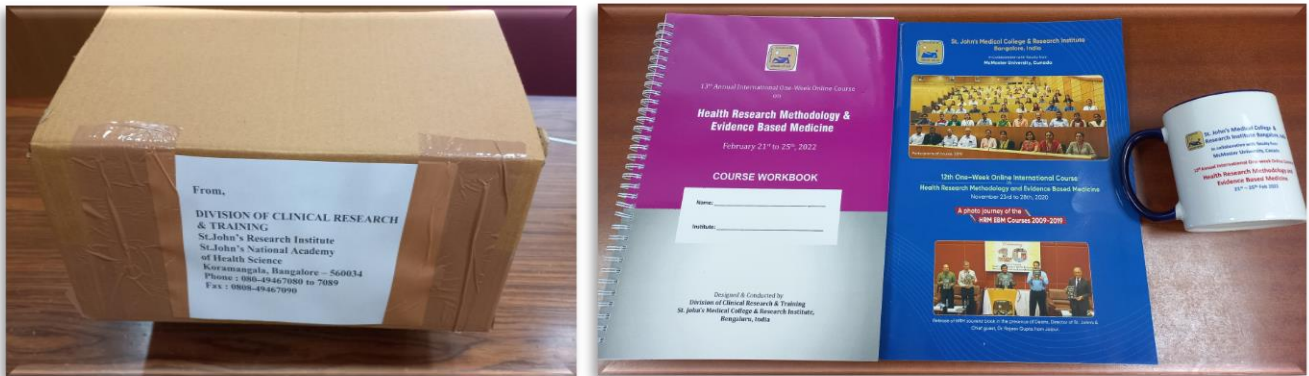
- To familiarize a wide range of health professionals in fundamentals of health research methods, and in evidence based medicine.
- To provide an opportunity to interact with like-minded professionals from varied health fields and to explore collaborations.

Participants:

The course was designed for faculty, postgraduate & PhD students (doctors, nurses and pharmacists), Pharma Industry professionals (medical & non-medical), ethics committee members, regulators and health policy makers.

We had 87 participants from 54 institutes who represented 43 cities from India, Sri Lanka, England and Ethiopia.

The course material which includes course book, HRM photo book & a coffee mug were couriered in advance to the participants. Reading materials too were sent in advance for each session in the Course.



HRM Course materials and souvenir

Faculty:

The faculty were from St. John's Medical College, St. John's Research Institute, Bangalore, AIIMS, Bhopal, University of Toronto and McMaster University, Canada.

McMaster University, Canada

Dr. Gordon Guyatt

Dr. P J Devereaux

St. John's Medical College, Bangalore

Dr. Deepak Kamath

Dr. Denis Xavier

Dr. Ramesh A

Dr. Tinku Thomas

University of Toronto

Dr. Onil Bhattacharyya

St. John's Research Institute

Ms Freeda Xavier

Dr. Prem Pais

AIIMS, Bhopal

Dr. Rajnish Joshi

Novartis, Hyderabad

Dr. Rahul Lad

Course methods:

The course methods included a combination of interactive live lectures, journal clubs, Zen protocol, small group discussions and finally ended with four project presentations.

There were **23 interactive lectures, 4 small group protocol discussions, 3 statistical practical sessions, 4 journal clubs** and **4 project presentations**. There were 15 lectures on health research methods, 5 on statistics and 3 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
2. Cross-sectional design
3. Case control study
4. Cohort study
5. Randomized Controlled Trials
6. Systematic Review and Meta-analysis
7. Qualitative studies
8. Grant writing
9. Ethics in research
10. Principle of Evidence Based Medicine and clinical practice
11. Knowledge translation and Health Policy

Lectures on Statistics included:

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

Statistics practical sessions included:

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

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

Lectures on project management included:

1. Data Management
2. IP & Sample
3. Regulatory and Budgets

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. Onil Bhattacharyya**

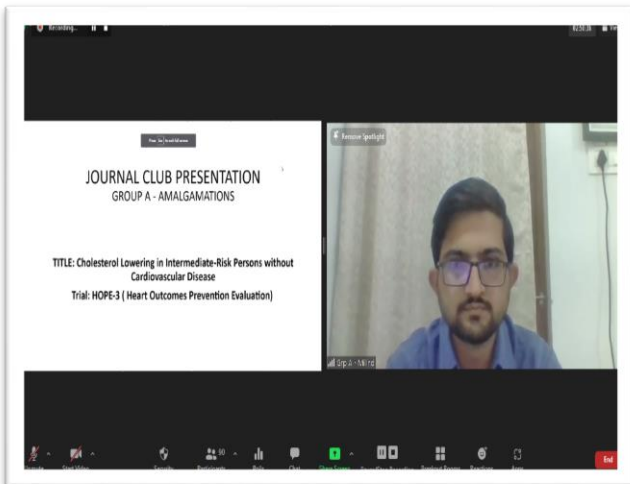
from the University of Toronto spoke on the methods of developing health services, rationale of knowledge translation and strategies of working with policy makers.

The **group activities** included four journal clubs (Registry/Cross sectional study, Case Control, Randomised Controlled Trial and Systematic Review/Meta-analysis) and four project presentations (Registry/Cross sectional study, Cohort study, Randomised Controlled Trial and Case Control). These sessions were done separately for each group on Zoom break out rooms.

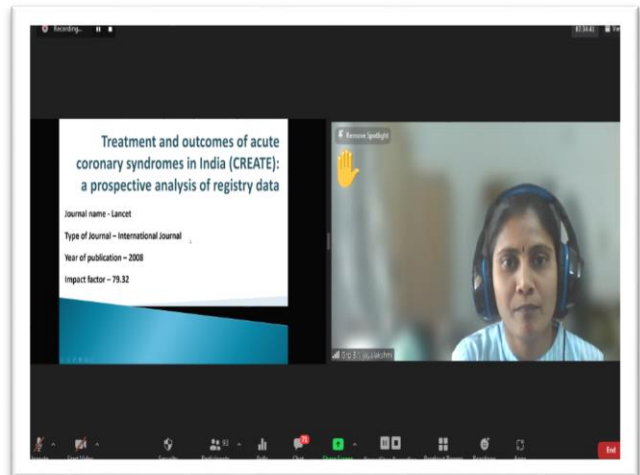
The **Zen protocol sessions** were held in small groups between the group members and the faculty late in the evening on day 2 & 3 of the course. Here there was an open discussion on the research question, design, methods, data analysis & budget of the project that each group was developing.

The speakers for journal clubs and project presentations were picked up randomly by chits. After the presentations, the entire group answered questions from the participants, faculty and peer judges. Judges for the course were prize winners of the previous courses, faculty members from St. John's Medical College and other institute like JIPMER Puducherry, AIIMS Bhopal, Public Health Foundation of India (PHFI) and ICMR (Indian Council of Medical Research).

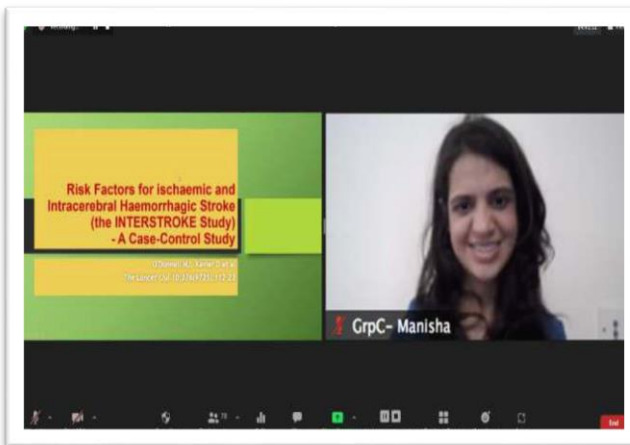
Journal club presentations



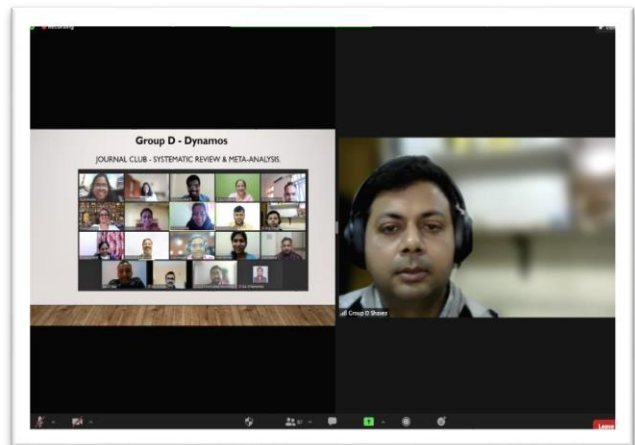
Group A, Milind Deshmukh,
Mahatma Gandhi Institute of Medical Sciences, Wardha



Group B, Vijayalakshmi,
Bangalore Medical College and Research Institute, Bengaluru



Group C, Manisha Chetan Khemani
Turtle Shell Technologies, Bengaluru



Group D, Shavez Stanley Haque
GSU India Hub, Ludhiana

The following were the Journal club articles presented by the groups:

Group	Date	Study design	Study title
A	24 th Feb	Randomized Controlled Trials	Cholesterol Lowering in Intermediate-Risk Persons without Cardiovascular Disease (HOPE -3) NEJM 2016
B	23 rd Feb	Cross sectional/ registry	Treatment and outcomes of acute coronary syndromes in India (CREATE): a prospective analysis of registry data Lancet 2008
C	24 th Feb	Case Control Study	Risk factors for ischaemic and intracerebral haemorrhagic stroke in 22 countries (the INTERSTROKE study): a case-control study. Lancet 2010
D	25 th Feb	Systematic Review and Meta-Analysis	Troponin elevations after non-cardiac, non-vascular surgery are predictive of major adverse cardiac events and mortality. BJA 2016

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 tests conducted on 4th day of the course and their group's performance in the Journal Club and Project presentation.

The test comprised of 30 multiple-choice questions. The 4 top participants in alphabetical order were



**Dr. Ashish Kakkar, Pharmacology
PGIMER, Chandigarh**



**Dr. Shubashree Karat, Ophthalmology
St, John's Medical College, Bengaluru**



**Dr. Vinay Jaikumar, Medicine
Bangalore Medical College & Research Institute,
Bengaluru**



**Dr. Vasanthan T, Neonatology
JIPMER, Karaikal**

2. Best Group Research Presentation award

A prize for the best group out of 4 was awarded based on the performance in the journal club and project presentation as well as the individual performance of the participants of the respective groups. The journal clubs and project presentations were evaluated by 4 faculty members based on knowledge, clarity of presentation, quality of slides and handling the questions. A certificate and a plaque were awarded to all participants in that group.



Group D - Winners of Best Group

Group D				
#	Name	Specialty	Institute	City
1	Anoop A	Radio diagnosis	Sreechitra Tirunal Institute	Thiruvananthapuram
2	Ashalatha. K	Anatomy	Narayana Medical College	Nellore
3	Joseph John M	Clinical Haematology		
4	Kreeti Pal	Community Medicine	Sikkim Manipal institute of Medical sciences	Gangtok
5	Mallanagouda Patil M	Paediatrics	BLDE (Deemed to be University)	Vijayapura
6	Manoja Wijethunga	Philosophy	University of Colombo	Colombo
7	Mimitha A M	Community Medicine	Jubilee Mission Medical College and Research Institute	Thrissur
8	Moumita Hazra	Pharmacology	Mamata Medical College and Hospitals	Kolkata
9	Mummareddi Eshwar	MBBS Internship	Mahavir Institute of Medical Sciences	Vikarabad
10	Padma Ram	Pharmacology	Dr. S. N. Medical College	Jodhpur
11	Rajeev Soni	Physiology	Rajasthan University of Health Science & Medical College	Jaipur
12	Richard Michael	General Medicine	Pondicherry Institute of Medical Sciences	Pondicherry
13	Santhosh Kumar	Anaesthesiology	Mamata Medical College	Khammam
14	Sarita Ramchandani	Anaesthesiology	All India Institute of Medical Sciences	Raipur
15	Shuba Srinivasan	General Medicine	Wayanad Institute of Medical Sciences	Wayanad
16	Shwetha Kumari G	Pharmacology	Kamineni Academy of Medical Sciences	Hyderabad
17	Shubashree Karat	Ophthalmology	St, John's Medical College & Hospital	Bengaluru
18	Shavez Stanley Haque	Research Assistant	Christian Medical College & Hospital	Ludhiana
19	Sumedha Mehta	Anaesthesia	Smt. Kashibai Navale Medical College and Hospital	Pune
20	Surabhi S	Gynaecology	St, John's Medical College & Hospital	Bengaluru
21	Tejus A	Pharmacology	Army Medical Corps	Delhi
22	Vasanthan T	Neonatology	JIPMER	Karaikal

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

Course Evaluation:

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

The following were the average scores on 5 in the structured evaluation.

Sessions	Score on 5
Lectures	4.4
Journal clubs	3.5
Project presentations	3.6
Statistics practical	4.4
Improvement of understanding Improvement of your skills	4.3
Value to your patient care in India in future	4.2
Time schedule	3.7
Registration	4.4
Conduct of the CME Programme	4.6
Overall	4.1

Open / unstructured Feedback

What participants liked about the course?

- Engaging, well thought off lectures and superb faculty that knew what they were talking about with great focused group sessions that solidifies the learning process.
- Systematic organization, team work and knowledge sharing in a simple way.
- Participant engagement was even better than other offline courses I have attended.
- Hand on approach to statistical exercises, timeliness and punctuality.
- The power of thanks you, value of others' opinion and importance of respecting others.
- Methodical and well organised.
- Group sessions, stress on having fun, making friends and collaboration in research and defending the research / project and inputs from judges.
- Encouraged participant involvement instead of just didactic lectures and speakers well versed in their fields.
- Friendly atmosphere, excellent course content, highly efficient and approachable faculty, and the small group activities.
- Dr Denis's energy levels and motivation, Dr Tinku's crystal clear and patient explanation of biostatistics and active and equal involvement of participants ensured by picking lots.
- Inclusivity of every participant, topics that were covered, were crisp, hitting the nail every time, especially dr. Ramesh sir's class, fun while learning.
- Active participation during the whole of the course period by the participants and faculty.
- The down to earth approach by the entire course faculty especially Dr. Denis Xavier.
- Random selection of participants for presentations and small group discussions – most important learning experience I had.
- I hadn't shared with you, my mom passed away due to sudden cardiac arrest 20 days ago. This workshop didn't allow me get into the grief mode as I was completely occupied each and every minute thinking about RCT, Cohort, bias, Non inferiority and all that. It was an excellent learning experience and a God sent opportunity.
- The patience of the entire faculty in helping to understand and solve the doubts.
- Great umbrella of teachers conducting course, honesty and transparency in deciding course winner.

- The stress on imparting the team spirit and positive vibe and rigour in teaching complex things in simplified way.
- Giving study materials prior and time table prior and strictly sticking to the things.
- Content, Clarity and Solving complex problems.
- Exposure to stalwarts in the field, their talks was inspiring esp. bits of their real life stories, Gordon Guyatt, PJ Devereaux.
- Strict monitoring and mentoring by Denis sir, discipline of the organisers, every class was conducted on time, there was no delay.
- Time management, idea of Zen Protocol and JC.
- It was an Eye opener to the wonderful world of research.
- The trainer's perspective really pushed my thinking from being an ordinary student of science to a scientifically oriented thinker. The course really made me enjoy group discussions on science.
- The Journal Clubs and Project Presentations and the way question and answer session happened after the presentations.
- Excellent team work of the coordinators, useful topics and eminent speakers.
- Effective time management and the emphasis to follow almost all sessions as per the proposed schedule.
- All study materials/documents were sent both by post and by e-mail promptly. The WhatsApp group was also managed well by the Group Admin.

Recommendation for improvement

- The course was just too intense. I was exhausted by the end and struggled with sitting through the last two days of lectures. Not to forget the added pressure of completing the project work.
- Consider time difference of other countries before starting the course to accommodate more international participants
- Time for practical session of SPSS
- SPSS software remote installation or clearing issues before the course.
- It'll be good if Small group activity is in the postprandial session in afternoon.
- More hands on training on Statistics and interpretation of statistical findings.
- Distribution of classes to help the course to be little less intensive.
- In-person course would be much better and improvement in reading material is recommended.
- Offline course and to spread the course content over 7-8 days.
- Probably increase course duration by one day.
- Feedback form should be given prior along with the study material, so that it can be filled immediately after each session, which will be a more reliable feedback.
- Participation of all in the team must be ensured.
- Criteria on which winners are selected must be revealed upfront.
- Time management and more statistical practical hours.
- More on grant writing and Publication.
- Course schedule should be restricted to eight hours per day and course duration may be increased to cover the content.
- More of an in-depth understanding of the statistical methodology used in different types of studies as well as interpretation will be useful.
- Smaller groups would be better to ensure equal participation of all members.
- More details on how to write project proposals for various types of studies from the stage of planning to implementation with examples will prepare us better in real life.
- MCQs assessment at the end of each important lecture.

- Send the resource material well in advance if you want the participants to get the max out of this workshop.
- Better conduct of individual assessment to remove time bias (1 min / question is too much), more strict assessment (equal assessment of all groups for Journal clubs).
- No focus given to SPSS training for regression statistics is a major shortcoming. The format of the course was so very suitable to the proper learning of regression statistics. I feel both organizers as well as the participants missed out on this opportunity.
- Time management, can be extended by 1 or 2 days at least.
- Can be planned in hybrid mode.
- Duration of course can be longer and practical session can follow immediately after theory class of respective topic.
- Spread the course in 2 weeks.
- Need more breaks. The time duration for something this extensive needs to be considered. Too short-too much.
- If possible, keep the sessions on weekends over a period of 3 / 4 weeks as it can help us to assimilate and thoroughly understand the aspects.
- Restrict schedule to only 8 hours per day.

Any other comment

- Thank you for a well-planned and conducted workshop. A special note of appreciation and regards for Prof. Denis Xavier whose knowledge and experience in the field and engagement with the participants is exemplary. Looking forward to more advanced courses with the SJRI.
- Hats off to the whole team for being patient with all of us while teaching. For giving this wonderful knowledge to us. Every session of your program made a difference in my understanding of research and statistics. I would like to extend personal thanks to each and every one in this program who taught us.
- This course was an eye opener, and improved our knowledge of research and publications. It made statistics easier. The faculty was excellent and highly qualified. Small group activities build a rapport among participants and will help in future collaborative studies.
- This is a life changing and a powerful course. I wish I did this earlier but never too late. Course should be conducted yearly twice or if possible more frequently so that many people can learn research methodology.
- It was an excellent learning experience, will recommend the course to friends and colleagues surely.
- Conduct the course offline if and when possible for more engagement, fun and learning!
- Offline session would have added more value to the course. St. John's can officially send invitation to medical colleges so that the colleges can relieve the PG's to attend the course. NMC can recommend this course for faculties in medical colleges instead of BCMR Course.

The course ended on 25th February with valedictory function. Awards were announced by the course director Dr. Denis Xavier. Plaques and Certificates will be couriered to the participants.

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

