Internship Training

At

NATIONAL BOARD OF EXAMINATIONS

(Jan 22 – May 01, 2014)

By

Dr.B.Bharat

(PG/12/018)

Post Graduate Program in Hospital & Health Management

(2012-14)

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH
NEW DELHI

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Effectiveness of CME on "Current Practices in Paediatrics" among delegates through pre & post test analysis.

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Dr.B.Bharat

Under the Guidance of

Dr.Radhika S.Adholeya

Post Graduate Program in Hospital & Health Management

(2012-14)

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NEW DELHI

Certificate of Approval

The following dissertation titled **"Effectiveness of CME on "Current Practices in Paediatrics" among delegates through pre & post test analysis"** at **"National Board Of Examinations"**is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

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TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr.Betapudi Bharat** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at **National Board of Examinations** from 22/01/2014 to 01/05/2014.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.
I wish him all success in all his future endeavors.

Dr. A.K. Agarwal
Dean, Academics and Student Affairs
IIHMR, New Delhi

Name of mentor
IIHMR, New Delhi

FEEDBACK FORM

Name of the Student : Dr.Betapudi Bharat

Dissertation Organisation : National Board of Examinations

Area of Dissertation : Training and Monitoring

Attendance : Complete

Objectives achieved : Completion of task with sincerity
Timely completion of projects assigned

Deliverables : "Effectiveness of CME on "Current Practices in Paediatrics" among delegates through pre & post test analysis"
"Evaluation of CME feedback on "current practices on Paediatrics" by the delegates"

Strengths : —

Suggestions for Improvement: —

Signature of the Officer-in-Charge/Organization Mentor (Dissertation)

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NATIONAL BOARD OF EXAMINATIONS

Date: 15/5/14

To Whomsoever It May Concern

This is to certify that **Dr.B.Bharat** in recognition of having successfully completed his internship in the department of **Training & Monitoring** and successfully completed his project on **Effectiveness of CME on "Current Practices in Paediatrics" among delegates through pre & post test analysis**.

I wish him all the best for future endeavours.

B.N.KHATRI
Deputy Director (Admin)
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Certificate from Dissertation Advisory Committee

This is to certify that **Dr. Betapudi Bharat,** a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He/ She is submitting this dissertation titled "**Effectiveness of CME on "Current Practices in Paediatrics" among delegates through pre & post test analysis**" at "**National Board Of Examinations**" in partial fulfillment of the requirements for the award of the **Post-Graduate Diploma in Health and Hospital Management.**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Dr.Radhika S.Adholeya
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Dr.Bipin Batra
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INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "**Effectiveness of CME on "Current Practices in Paediatrics" among delegates through pre & post test analysis**" and submitted by **Dr.B.Bharat** Enrollment No **PG/12/018** under the supervision of **Dr.Radhika S.Adholeya** for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from **22/01/2014** to **01/05/2014** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

B Bharat 15/5/14

Signature

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ABSTRACT

CME is an educational activities that serve to maintain, develop, or increase the knowledge, skills, performance, and relationships a physician uses to provide services for patients, the public, or the profession. Understanding what CME tools and techniques are most effective in disseminating and retaining medical knowledge is critical to improving the effectiveness of CME and thus diminishing the gap between evidence and practice.

To assess the effectiveness of CME on "Current practices in Paediatrics" the study was taken with prime objective to measure the score gained by delegates on current practices in Paediatrics through pre & post test score analysis. CME was conducted at National Board of Examinations, New Delhi with sample size of 91 delegates with pediatric clinical background were participated and given pretest before the beginning of the CME and posttest test was conducted after the completion of CME. Study result showed overall pre-test mean knowledge scores was 11.03 and median was 11; whereas post-test mean knowledge scores was 17.64 and median was 18. There was considerable mean score difference of (post-test) - (pre-test) score of 6.6. The paired T test statistics showed by showed $t(90) = 15.34$, the p value of paired T test was .000 which is less than $p<0.005$ which was significant at 0.05 level. Though the delegates were of Paediatric background, during pre-test their knowledge level was found to be poor and after delegates has attended the CME on "Current practices on Paediatrics" showed considerable improvement in post-test score. Thus there is a necessity to conduct continuing medical education to update the knowledge of the health personnel.

ACKNOWLEDGEMENT

I owe my sincere gratitude to many people who helped and supported me during the course of this project.

I would like to express my heartfelt gratitude and deep appreciation to my esteemed mentor Dr. BIPIN BATRA, Executive Director, NBE for his excellent guidance, constant support and encouragement without which the successful completion of this project would have been a distant reality. His critical approach, guidance, unflinching support and constant encouragement have helped me to bring this project to a successful completion.

It is with immense pleasure and honor that I take this opportunity to express my heartfelt gratitude and deep appreciation to my esteemed professor and guide Dr.RADHIKA S. ADHOLEYA, for guiding and correcting various documents of mine with attention and care. I really appreciate all the pain she took to go through the project and suggesting necessary corrections as and when needed. Her tireless pursuit for perfection and professional insight were a source of constant inspiration to me.

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Dr.B.Bharat

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List of Abbreviations

NBE - National Board of Examinations

DNB - Diplomate of National Board

MIC – Medical Council of India

CME - Continuing Medical Education

IGNOU - Indira Gandhi National Open University

AAMC - American Association of Medical Colleges

ACCP - American College of Chest Physicians

EPC - Evidence based Practice Center

KQ - Key Questions

1.1 Organizational profile

The national board of examinations was established in 1975 on the basis of the report of a working group set up by the then prime minster Smt. Indira Gandhi. Since 1982 the board has been functioning as an independent autonomous body established under societies registration Act.

The Board conducts following activities.

1. EXAMINTIONS: The National Board of Examinations conducts examinations in a planned and scientific manner in regard to evaluation, assessment.

The following exams are conducted by NBE

I. CENTRALIZED ENTRANCE TEST (CET): There is a common CET for all broad specialties. Candidates who have completed their compulsory internship after graduation are eligible to take CET examination. Centralized Entrance Test (Super-Specialities) and Centralized Entrance test (Post-Diploma).

II. FINAL THEORY EXAMINATION consists of 4 papers of 3 hours duration on each consisting of 10 short answer/essay type questions. A total 3056 and 4324 candidates appeared and 1011 and 1743 passed in the DNB final examination during the year 2009-2010 and 2010-2011 respectively (exam conducted twice a year at exam centres all across country)

III. POST DOCTRAL FELLOWSHIP PROGRAMMES: India has expertise in various sub-speciality areas, with centres having high tech equipment and trained man power performing exceptional quality work. There are many young medical post graduates with aptitude for higher learning. Considering the need to increase man power that can render highest degree of profession work, the National board has started postdoctoral Fellowship courses in 16 specialties.

IV. SCREENING TEST FOR FOREIGN MEDICAL GRADUATES: The government of India has entrusted the conduct of screening test regulation 2002 for the candidates who have undergone medical training abroad to National Board. The purpose of screening test to qualify for registration as medical practitioner with the MCI or any state medical council. Exam is conducted twice a year since year 2002.

2. ACCREDITATION

The board is the prime national level organization that has a set a mechanism for imparting post graduate teaching and training in the sphere of higher medical education. Leading centres of excellence and in public, private and defence institutes all over the country that have been accredited by NBE for imparting training based on the defined accreditation criteria.

3. CONTINUING MEDICAL EDUCATION PROGRAMME/ WOKSHOPS:

National Board of Examination in its continuing endeavour to undertake capacity building and strengthen the Post graduate medical education in the country conducts Continuing Medical Education Programme / workshops for benefits of post graduate trainee, faculty and specialists/consultants. NBE conducts the CME programmes as follows:

I. E-learning- satellite based interactive sessions are conducted using television broardcast on Gyan Darshan channel every Thursday. This session provide two-way audio communication and one-way video communication between the faculty and the DNB students. NBE also conducts interactive sessions on FM radio every Thursday from 5:00 PM to 6:00 PM on Gyan Vani.

II. NBE has also set up a repository of electronic content in medical education covering all board and super specialties through titles available in DVD volumes. These titles cover wide range of issues as a part of the post graduate curriculum in modern medicine from common topics to esoteric areas of knowledge which otherwise are not easily available as learning resource.

III. Workshops in research methodology:

NBE in its continuing endeavour to strengthen research and facilitate capacity building in research methodology periodically conducts workshops for benefits of Post graduate candidates and faculty members.

4. SPECIALITY ADVISORY BOARDS: NBE has constituted speciality advisory boards for various disciplines in which examinations are conducted. The experts from all over the country drawn from various institutes in various disciplines are member of these boards.

5. Diplomate of National Board (DNB) is the title awarded by the National Board of Examinations (NBE), an autonomous academic body under the Ministry of Health and Family Welfare, Government of India to candidates who successfully complete their postgraduate or postdoctoral medical education under it.

6. The Board sustains its activities through following means:

Income from examination fees etc (operational activities) – Examination fees and accreditation fees are charged from applicant institute/candidates to cover the recurrent operational expenditure. Any income more than expenditure, is any, is utilized for capital expenditure and creation of infrastructure of NBE such as regional offices and extending the activities of NBE.

Plan development/capital expenditure is supported by ministry of health by giving bulk grant.

1.2 Research Area

- Working as Research Associate in Training & Monitoring at National Board Of Examinations, New Delhi

1.2.1 Areas of Engagement

1. Conduction Tele conferences
2. Conducting Radio conferences
3. Conducting CME/Workshops
4. Appraisal online websites page formatting

1.2.2 Managerial Tasks

1. Coordinated meetings
2. Coordinated CME On " current practices in paediatrics"
3. Coordinated Tele & Radio Counselling at IGNOU every Thursday
4. General Tasks in the Training & Monitoring Department.

1.2.3 Reflective learning

1. Organizing CME's
2. Conducting Tele & radio counselling 's
3. Preparation of official documents'
4. Prioritization of work
5. Time management

2.1. Introduction

Continuing Medical Education programmes help health professionals to be in touch with rapid advances in biomedical knowledge like newer methods, research, technology and clinical practice. Changing expectations of physicians as effective communicators and team members, enhanced awareness of the role of physicians in disease prevention, incorporation of evidence-based medicine, accountability, and financial incentives into daily medical practice, changing work environments as more care moves to ambulatory settings make the necessity of CMEs to be organised regularly[1]. CMEs are used as evidence of competence for medical practice when granting re-licensure to medical institutions, hospital privileges, specialty recertification, professional society membership and recognition for selected other professional activities etc. [1].

Topic of a CME may be selected depending on learning needs of delegates. Need for better coalition of educational content and goals (objectives) with evolving societal needs, practice patterns and scientific developments. Actions must take place at national, local and individual levels [1]. There is need for a more systematic and rigorous analytic approach, where CME content is determined according to assessed needs and CME is evaluated using outcome measures [2]. In an article the authors have tried to define the action steps to enact a new vision of CME wherein they have indicated the need to collaborate to develop and implement new systems to measure learning [1]. They have mentioned that CME outcomes assessment, measures to validate educational effectiveness, and efforts to promote educational evaluation research will expand our thinking [1]. They have recommended (for institutional and organizational members of the American Association of Medical Colleges [AAMC]) developing resources using available and new information to define outcomes and assess them, developing an inventory of evaluation resources and tools that can be used in CME efforts, and encouraging development and testing of new assessment tools, with training to use them[1]. The evaluation should reflect not only whether physicians (delegates) have learned from participating in a CME program, but whether practice behaviours and/or patient outcomes have changed as a result[2]. Also if CME directors cannot show the effectiveness of their programs in meeting such needs, physicians should question the usefulness of attending CMEs and the accrediting body, which may

represent the physician, should restrict its accreditation of such programs [3].

There will be concerns about whether CME works or how we should present (technique of delivery) it. New forms of CME must incorporate and take advantage of new technology based on its intrinsic capacity to foster learning, and not merely on convenience factors [2].

We live in a “Prove it!” age. Those responsible for the continuing education of practitioners feel much pressure from professional educators, the public, and both private and governmental agencies to show that a project is worthwhile (that the money was/will be beneficially spent).Therefore, much effort is expended in the struggle to evaluate effort and demonstrate that a given exercise in continuing education indeed improved health care [4].

Concern has been expressed about the need to demonstrate the effectiveness of CME in improving physician performance and outcomes for patients' health [5]. CME must be evaluated and that we should not permit ourselves the luxury of not pursuing the question of its worth simply because it is too complex or may be too full of negative findings [6].

Literature survey indicates the strong need to evaluate the CMEs. Therefore in the present study two CME's organized at our institution have been evaluated.

The American College of Chest Physicians (ACCP) recognized the potential value of identifying and synthesizing the evidence in this area, and nominated this topic to the Evidence based Practice Center (EPC) Program of the Agency for Healthcare Research and Quality (AHRQ). In response to this request by the ACCP, the Johns Hopkins EPC performed a systematic review to address the following key questions (KQ) pertaining to the effectiveness of CME:

KQ1) is there evidence that particular methods of delivering CME are more effective in:
a) Imparting knowledge to physicians,
b) Changing physician attitudes,

c) Acquiring skills,
d) Changing physician practice behaviour, or
e) Changing clinical practice outcomes?

KQ2) Do changes in knowledge, attitudes, skills, practice behaviour, or clinical practice Outcomes produced by CME persist over time (greater than or equal to 30 days)?

KQ3) What is the evidence from systematic reviews about the effectiveness of simulation methods in medical education outside of CME?

KQ4) Which characteristics of the audience by themselves or in combination with other characteristics influence the effectiveness of certain educational techniques?

KQ5) Which external factors by themselves or in combination with other factors reinforcethe effects of CME in changing behavior?

KQ6) What is the reported validity and reliability of the methods that have been used for measuring the effects of CME in terms of:
a) imparting knowledge,
b) changing attitudes,
c) acquiring skills,
d) changing practice behavior, or
e) changing clinical practice outcomes?

2.2. Title of the study

Effectiveness of CME on "Current Practices in Paediatrics" among delegates through pre & post test analysis.

2.3. Objectives

1. To measure the score gained by delegates on current practices in paediatrics through pre & post test score analysis.
2. To evaluate effectiveness of CME on the same.

2.4. Review of Literature

1. Effectiveness of CME on "Pediatric Emergencies and Management" Among the Health Personnels in Community Health Centre, Karikalampakkam, Puducherry. [7]

This study was conducted at Karikalampakkam village of Puducherry. Karikalampakkam is a Community Health Center with seven subcenters under it. The research design was one of the Quasi Experimental Design pre and post test with one group. All the health personnels like ANM, PHN, Health educators were considered as subjects for the study. The sample size was 40 and selected by purposive sampling technique. Pretest was conducted before the CME programme with the structured interview schedule. Post test was conducted after completion of the programme with the help of same tool. Study finding were The pretest mean knowledge score among the health personnels was 3.15 ± 0.89 with the mean percentage 7.8 % whereas the posttest mean knowledge score was 4.47 ± 1.58 with mean percentage 11.17 %. The Z value was −2.555 and the p value was 0.011 ($p < 0.05$) which was significant at 0.05 level. Conclusions of the study Though the health personnels are already trained, during pretest their knowledge level was found to be poor and after training, the results show that their knowledge improved. Thus, there is a necessity to conduct inservice training programmes to update knowledge and skill of health personnels.

2. Effectiveness of a Planned Teaching Program on Knowledge and Skill in the Use of Partograph among Nurses Working in Maternity Unit. [8] The research approach for the study was that of an evaluative one with one group pre-test post-test design. The study comprised of 30 nurses working in maternity unit of KLES Dr Prabhakar Kore Hospital and Medical Research Center, Belgaum. The tool used for gathering relevant data was a structured questionnaire on knowledge and skill in the use of partograph. Study *Results* was found that the overall pre-test mean knowledge scores was 13.9, whereas post-test mean knowledge scores was 21.83. The range between highest score and the lowest score in the pre-test was 15 which was decrease to 5 after administration on planned teaching program in the post-test. The overall pre-test mean skill scores were 5.57, whereas post-test mean skill scores was 12.63. The range between highest scores and lowest scores in the pre-test was 9 which was decrease to 7 after administration of planned teaching program in the post-test. Conclusion of study was based on the analyses of the findings of the study, the following inference was

drawn. There was evident increase in the knowledge and scores in all the areas included in the study after administration of planned teaching program. Thus it was inferred that the planned teaching program was effective and while the gain in knowledge and skill score is commendable, there is still room for improvement.

2.5. Methodology

2.5.1 Study area:

It was conducted at national board of examinations, New Delhi where CME was conducted on "current practices of paediatrics" with collaboration with Lippincott academy of clinical excellence.

2.5.2 Study design:

Quasi experimental study

2.5.3 Study sample:

Total 91 delegates from paediatrics clinical background has participated from all over India for the CME.

2.4.3 Tools & technique:

- Pre-test & post-test questionnaire of total 23 structured questionnaires were administrated to delegates before the CME and after completing CME.
- Microsoft excel 2007 & SPSS 3.0 were used to analysis the data.
- Paired T-test is used as statistical formula to reject or accept the null hypothesis**.**

2.6. Study results

Table: 2.6.1 Pre-test & post test score summary

S.no	Pre-test Score out of 23	% of Pre-test Score	Post test Score out of 23	% post-test of score
1.	11	48	19	83
2.	8	35	17	74
3.	13	57	20	87
4.	10	43	15	65
5.	11	48	19	83
6.	6	26	19	83
7.	11	48	20	87
8.	7	30	16	70
9.	11	48	18	78
10.	10	43	20	87
11.	11	48	18	78
12.	13	57	14	61
13.	16	70	18	78
14.	15	65	23	100
15.	12	52	23	100
16.	12	52	20	87
17.	16	70	14	61
18.	12	52	13	57
19.	8	35	16	70
20.	18	78	17	74
21.	12	52	15	65

22.	11	48	17	74
23.	12	52	13	57
24.	10	43	11	48
25.	14	61	16	70
26.	11	48	20	87
27.	8	35	20	87
28.	15	65	11	48
29.	14	61	15	65
30.	9	39	16	70
31.	9	39	11	48
32.	7	30	14	61
33.	6	26	19	83
34.	11	48	18	78
35.	17	74	15	65
36.	17	74	23	100
37.	13	57	23	100
38.	17	74	15	65
39.	8	35	19	83
40.	10	43	18	78
41.	8	35	20	87
42.	7	30	19	83
43.	10	43	21	91
44.	9	39	17	74
45.	14	61	20	87
46.	11	48	19	83
47.	9	39	19	83

48.	10	43	19	83
49.	7	30	21	91
50.	14	61	19	83
51.	8	35	19	83
52.	13	57	19	83
53.	8	35	19	83
54.	10	43	17	74
55.	9	39	19	83
56.	5	22	19	83
57.	7	30	21	91
58.	6	26	18	78
59.	15	65	18	78
60.	13	57	17	74
61.	14	61	15	65
62.	12	52	20	87
63.	10	43	19	83
64.	8	35	12	52
65.	12	52	15	65
66.	10	43	15	65
67.	6	26	15	65
68.	11	48	18	78
69.	10	43	17	74
70.	6	26	19	83
71.	14	61	18	78
72.	9	39	18	78

73.	11	48	18	78
74.	10	43	16	70
75.	13	57	16	70
76.	13	57	14	61
77.	8	35	12	52
78.	7	30	14	61
79.	12	52	21	91
80.	17	74	19	83
81.	9	39	17	74
82.	11	48	14	61
83.	15	65	18	78
84.	15	65	18	78
85.	17	74	22	96
86.	16	70	21	91
87.	13	57	19	83
88.	6	26	20	87
89.	14	61	20	87
90.	10	43	17	74
91.	10	43	21	91

Table 2.6.2: Pre-Test & Post-Test score frequency table

Statistics			
		Pre-test score	Post-test score
N	Valid	91	91
	Missing	0	0
Mean		11.0330	17.6484
Median		11.0000	18.0000
Mode		10.00	19.00
Std. Deviation		3.14625	2.79035
Minimum		5.00	11.00
Maximum		18.00	23.00
Sum		1004.00	1606.00

The overall pre-test mean knowledge scores was 11.03 and median was 11; whereas post-test mean knowledge scores was 17.64 and median was 18.

Maximum knowledge score was 18 and minimum score was 5 out of 23 marks in pre-test; whereas post-test Maximum knowledge score was 23 and minimum score was 11 out of 23 marks.

Table 2.6.3: Pre-test score frequency statistics

Pre-test score		Frequency	Percent
	5.00	1	1.1
	6.00	6	6.6
	7.00	6	6.6
	8.00	9	9.9
	9.00	7	7.7
	10.00	13	14.3
	11.00	12	13.2
	12.00	8	8.8
	13.00	8	8.8
	14.00	7	7.7
	15.00	5	5.5
	16.00	3	3.3
	17.00	5	5.5
	18.00	1	1.1
	Total	91	100.0

Figure 2.6.1: Frequency of Pre-test score by 91 delegates

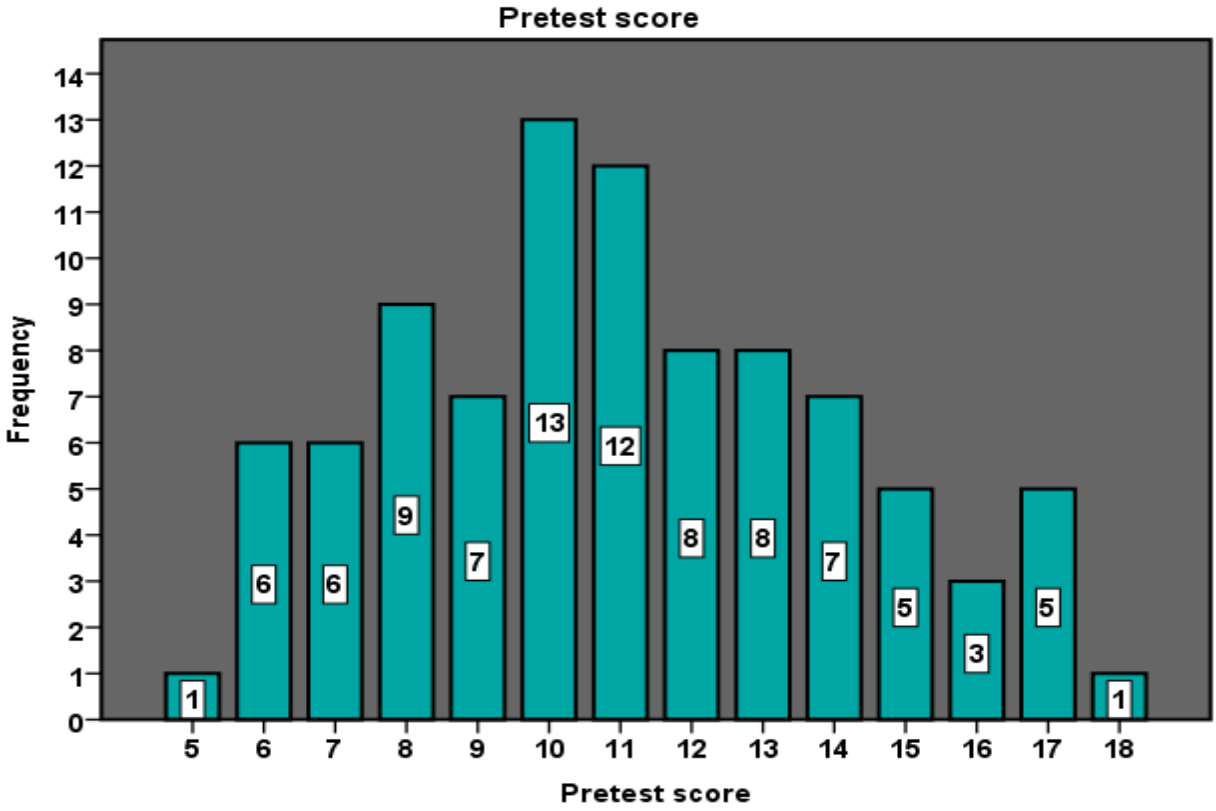


Table 2.6.4: post-test score frequency statistics

Post-test score		Frequency	Percent
Valid	11.00	3	3.3
	12.00	2	2.2
	13.00	2	2.2
	14.00	6	6.6
	15.00	9	9.9
	16.00	6	6.6
	17.00	9	9.9
	18.00	13	14.3
	19.00	19	20.9
	20.00	11	12.1
	21.00	6	6.6
	22.00	1	1.1
	23.00	4	4.4
	Total	91	100.0

Figure 2.6.1: Frequency of Post-test score by 91 delegates

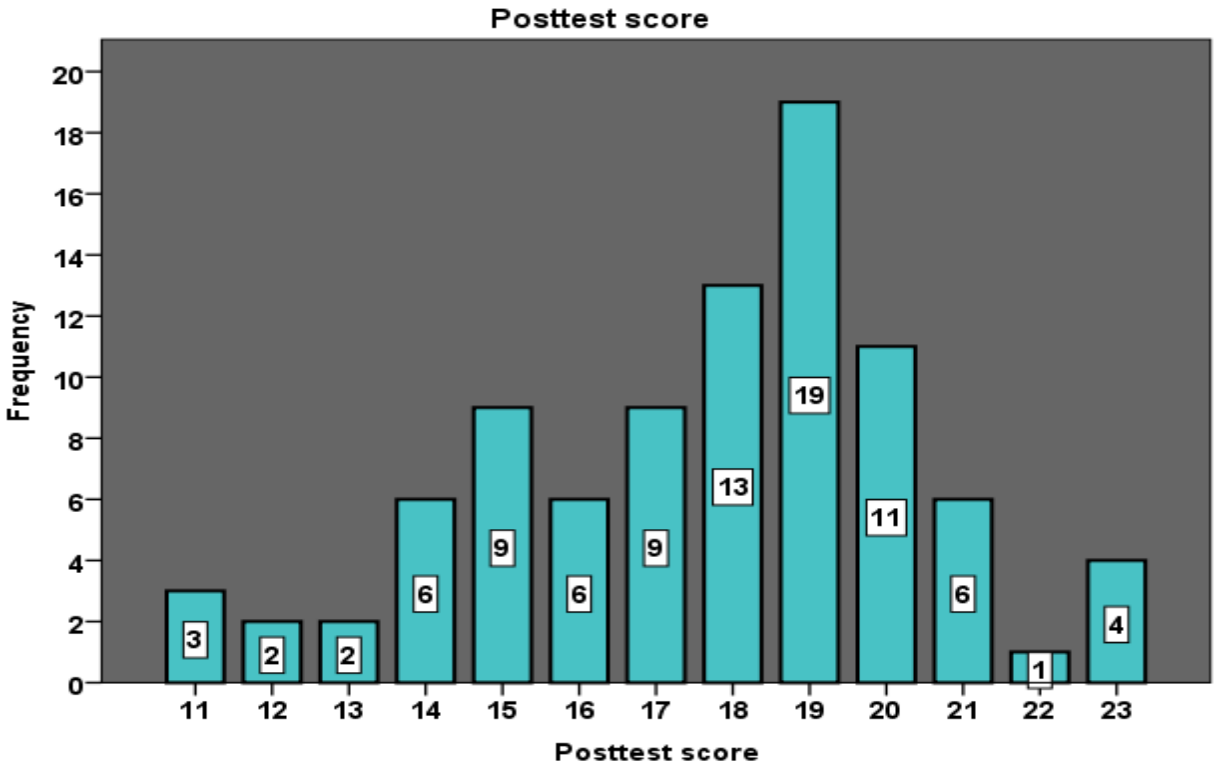


Table 2.6.5: pre-test & post-test score descriptive statistics

Descriptive Statistics							
	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
Pre-test	91	13.00	5.00	18.00	1004.00	11.0330	3.14625
Post-test	91	12.00	11.00	23.00	1606.00	17.6484	2.79035

Table 2.6.6: Paired pre-test & post-test score Statistics

		Mean	N	Std. Deviation	Std. Error Mean
	Posttest	17.6484	91	2.79035	.29251
	Pretest	11.0330	91	3.14625	.32982

Mean knowledge score gain in delegates after attending CME on "current practices on paediatrics" was 6.6.

Table 2.6.7: Paired pre-test & post-test Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
post-test - pre-test	6.61	4.11	0.43	5.76	7.47	15.34	90	.000

Paired T- test result showed t (90) = 15.34, the p value of paired T test was .000 which is less than p<0.005 which was significant at 0.05 level. So, null hypothesis is rejected stating that there was significant difference between pre-test and post-test score after administration of CME on delegates.

2.7. Discussion

In the present study a sample of 91 delegates with paediatric background were considered in the study. Finding showed that The overall pre-test mean knowledge scores was 11.03 and median was 11; whereas post-test mean knowledge scores was 17.64 and median was 18. There was considerable mean score difference of (post-test) - (pre-test) score of 6.6. Similar findings were found by Arez Saviola, Raddi Sudha A, Metgud MC in their study on nurses that The overall pre-test mean knowledge scores was 13.9 and median was 14; whereas post-test mean knowledge scores was 21.83 and median was 22 and the mean score difference of (post-test) - (pre-test) score of 7.93.

The paired T test statistics showed by showed t (90) = 15.34, the p value of paired T test was .000 which is less than p<0.005 which was significant at 0.05 level. So, null hypothesis is rejected stating that there was significant difference between pre-test and post-test score after administration of CME on delegates. Similar findings were seen by V.vasuduevaiah, Manjubala Dash in their study the p value was 0.011 ($p < 0.05$) which was significant at 0.05 level and t (39) = 2.5.

2.8 Limitation of study

1. Only knowledge aspects of delegates were reviewed in the study to prove effectiveness of the CME on "current practices in paediatrics"
2. Skills gained & change in physician attitudes, behaviour & clinical practice outcomes were not reviewed in study.

2.9. Conclusion

Though the delegates were of paediatric background, during pre-test their knowledge level was found to be poor and after delegates has attended the CME on "current practices on paediatrics" showed considerable improvement in post-test score. Thus there is a necessity to conduct continuing medical education to update the knowledge of the health personnel.

2.10. Recommendations

1. Direction to reach to the CME venue should be printed in the brochure.
2. Time for the break should have been increased by 15 minutes more.
3. Food stall points should have been increased by 3 or more so as to utilize break time appropriately.
4. CME should have included more skill based workshop or hands on training workshop.
5. Handouts of CME topics should have been provided at same time of CME for better understanding of subject.

3. Case Study

3.1 Title of study:

Evaluation of CME feedback on "current practices on paediatrics" by the delegates

3.2 Objectives:

1. To evaluate the satisfactory level among the delegates over the conduct level of CME.
2. To acquire useful data from feedback for the future success of other CME.

3.3 Study area:

It was conducted at national board of examinations, New Delhi where CME was conducted on "current practices of paediatrics" with collaboration with Lippincott academy of clinical excellence.

3.4 Study design:

Cross sectional study

3.5 Study sample:

Total 68 delegates from paediatrics clinical background has given the feedback.

3.6 Tools & technique:

- Feedback questionnaire of total 7 structured questionnaire were administrated to delegates after completion of CME
- SPSS 3.0 was used to analysis the data.

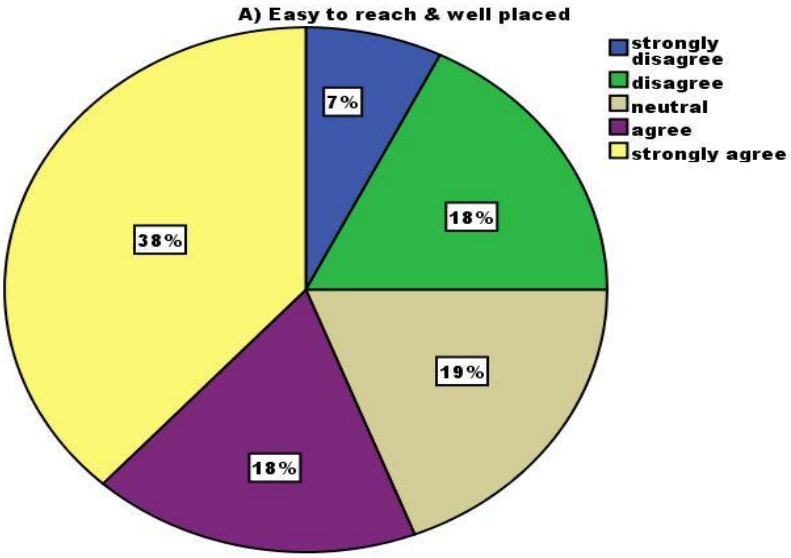
3.7 Study results:

1. The CME venue was:

A) Easy to reach & well placed

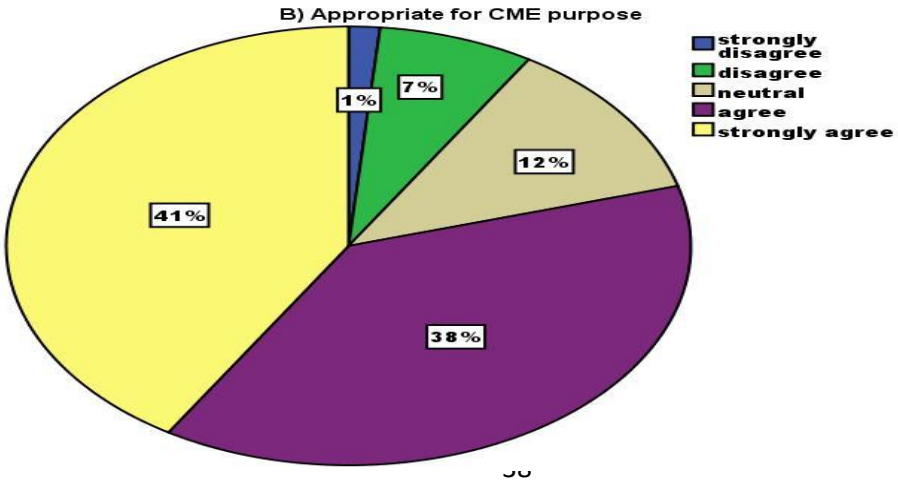
	Frequency	Percent
strongly disagree	5	7.4
disagree	12	17.6

neutral	13	19.1
agree	12	17.6
strongly agree	26	38.2
Total	68	100.0



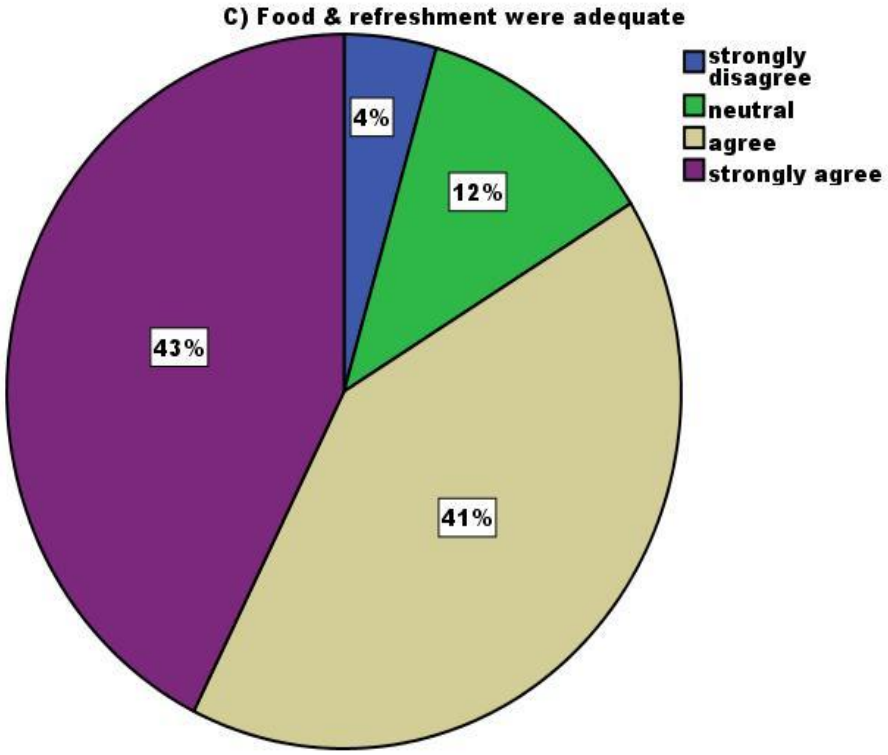
B) Appropriate for CME purpose

	Frequency	Percent
strongly disagree	1	1.5
disagree	5	7.4
neutral	8	11.8
agree	26	38.2
strongly agree	28	41.2
Total	68	100.0



C) Food & refreshment were adequate

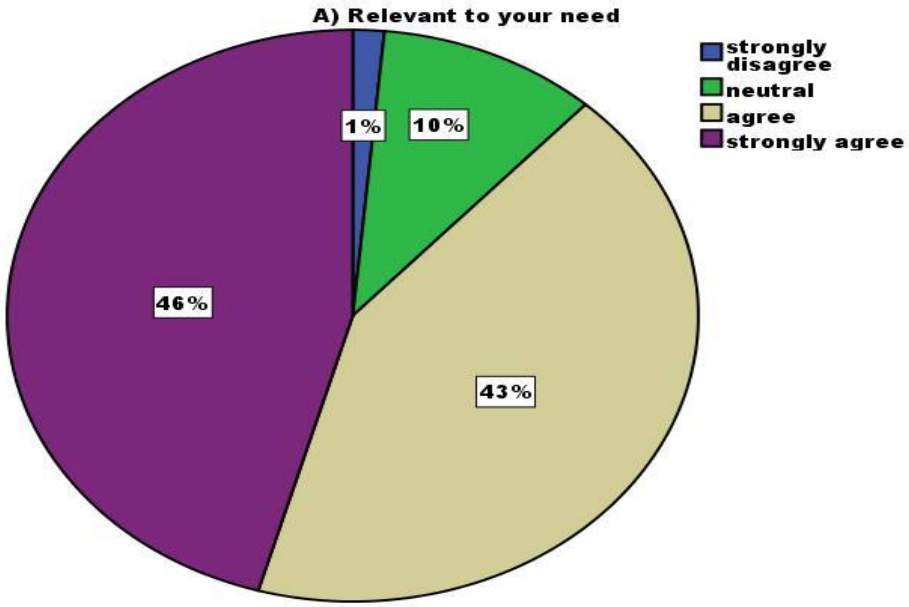
	Frequency	Percent
strongly disagree	3	4.4
neutral	8	11.8
agree	28	41.2
strongly agree	29	42.6
Total	68	100.0



2. The CME content was:

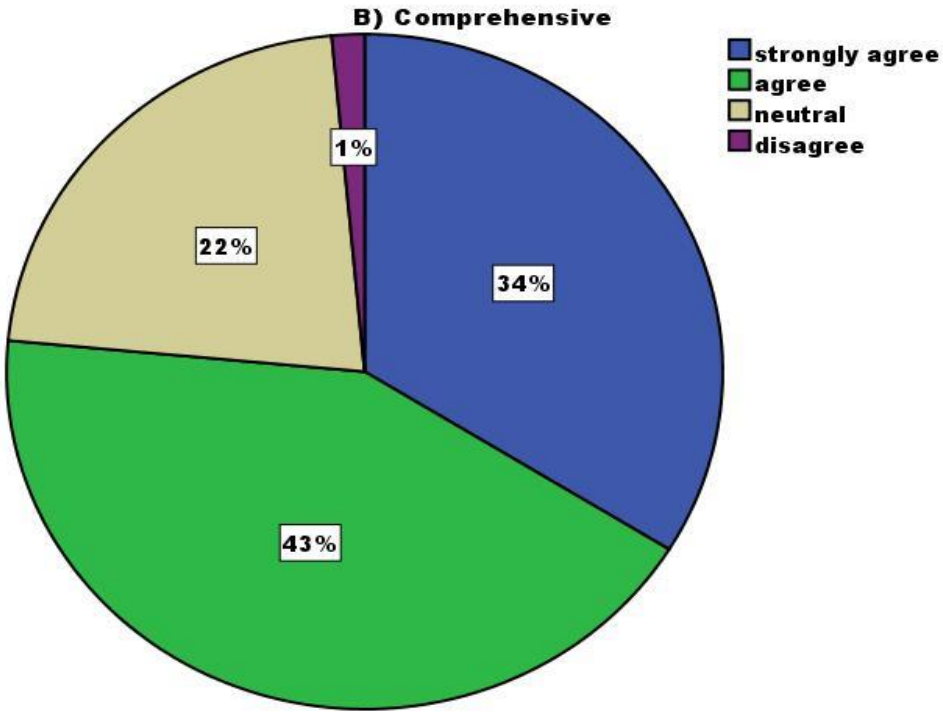
A) Relevant to your need

	Frequency	Percent
strongly disagree	1	1.5
neutral	7	10.3
agree	29	42.6
strongly agree	31	45.6
Total	68	100.0



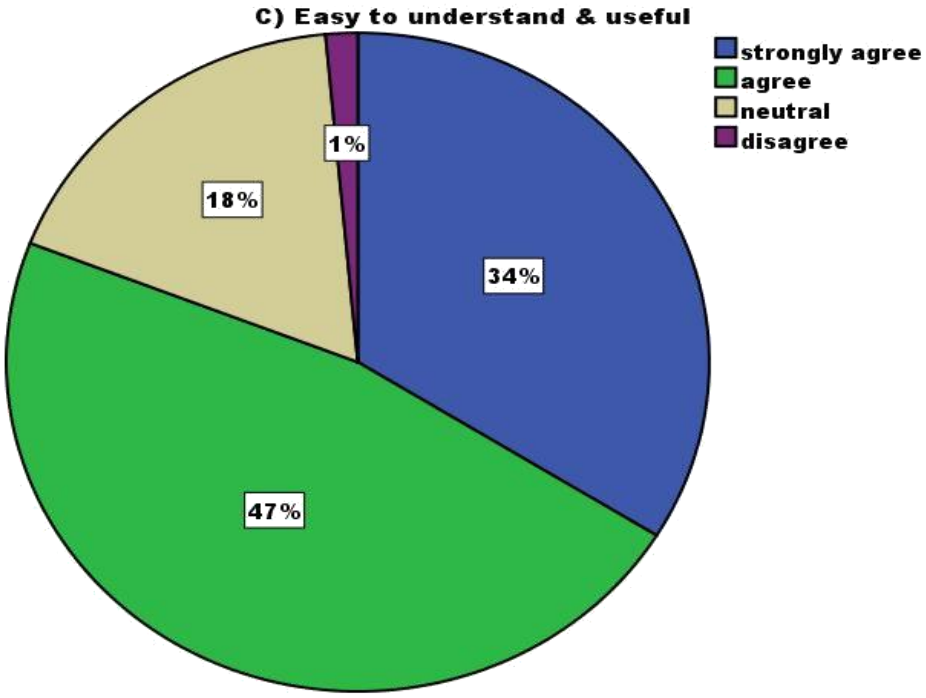
B) Comprehensive

		Frequency	Percent
Valid	disagree	1	1.5
	neutral	15	22.1
	agree	29	42.6
	strongly agree	23	33.8
	Total	68	100.0



C) Easy to understand & useful

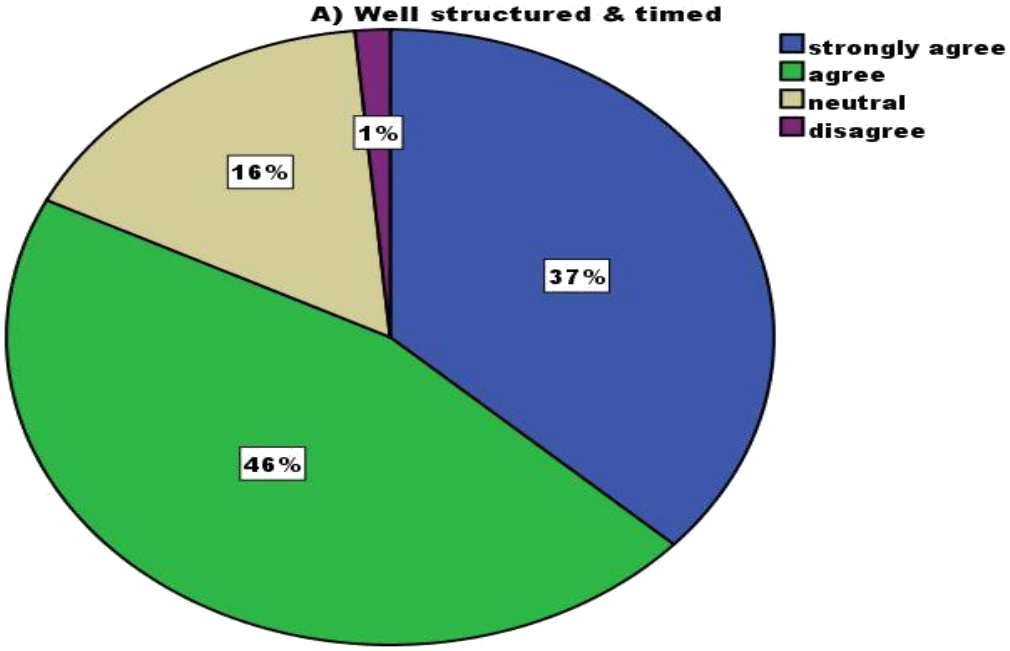
		Frequency	Percent
Valid	disagree	1	1.5
	neutral	12	17.6
	agree	32	47.1
	strongly agree	23	33.8
	Total	68	100.0



3. The CME was

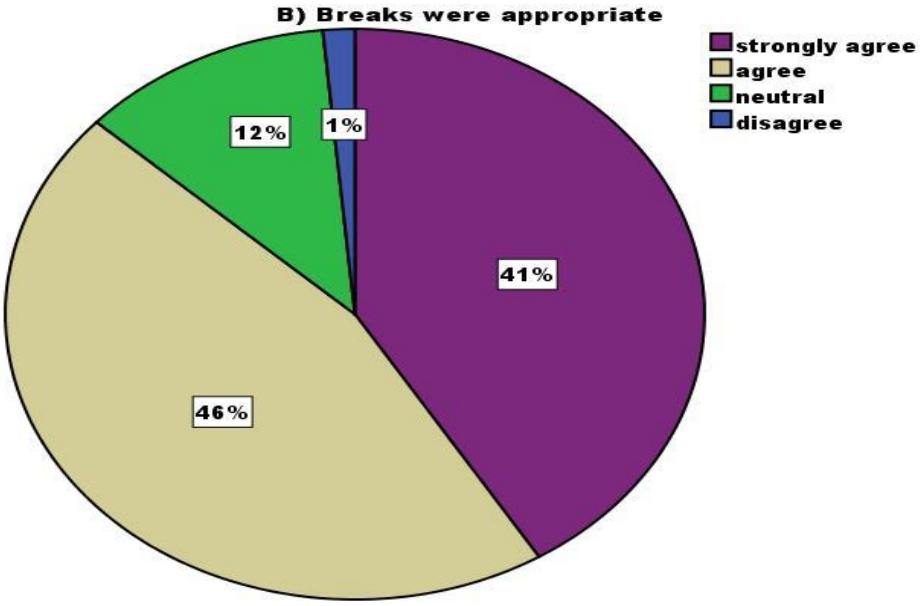
A) Well structured & timed

		Frequency	Percent
Valid	disagree	1	1.5
	neutral	11	16.2
	agree	31	45.6
	strongly agree	25	36.8
	Total	68	100.0



B) Breaks were appropriate

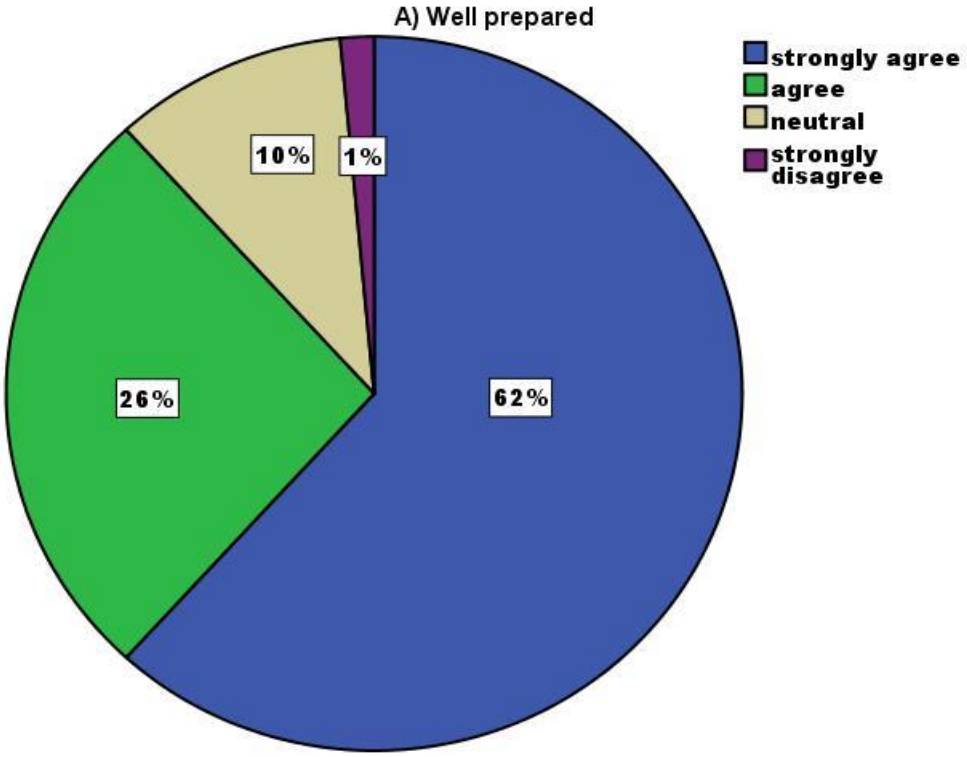
		Frequency	Percent
Valid	disagree	1	1.5
	neutral	8	11.8
	agree	31	45.6
	strongly agree	28	41.2
	Total	68	100.0



4. The experts were:

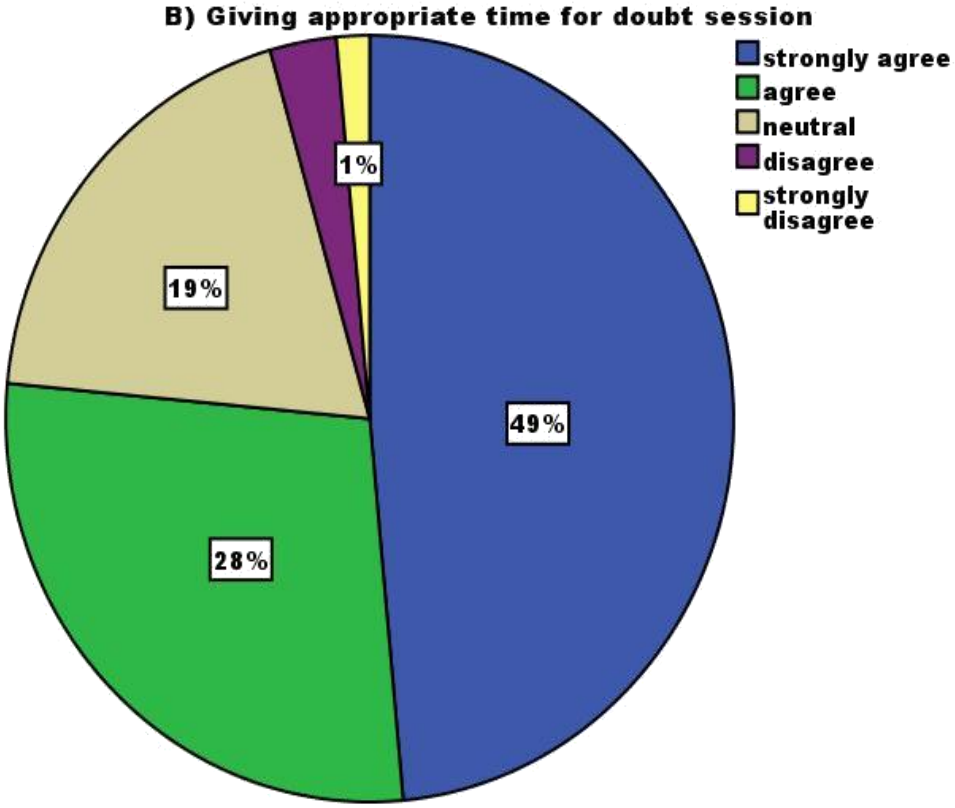
A) Well prepared

		Frequency	Percent
Valid	strongly disagree	1	1.5
	neutral	7	10.3
	agree	18	26.5
	strongly agree	42	61.8
	Total	68	100.0



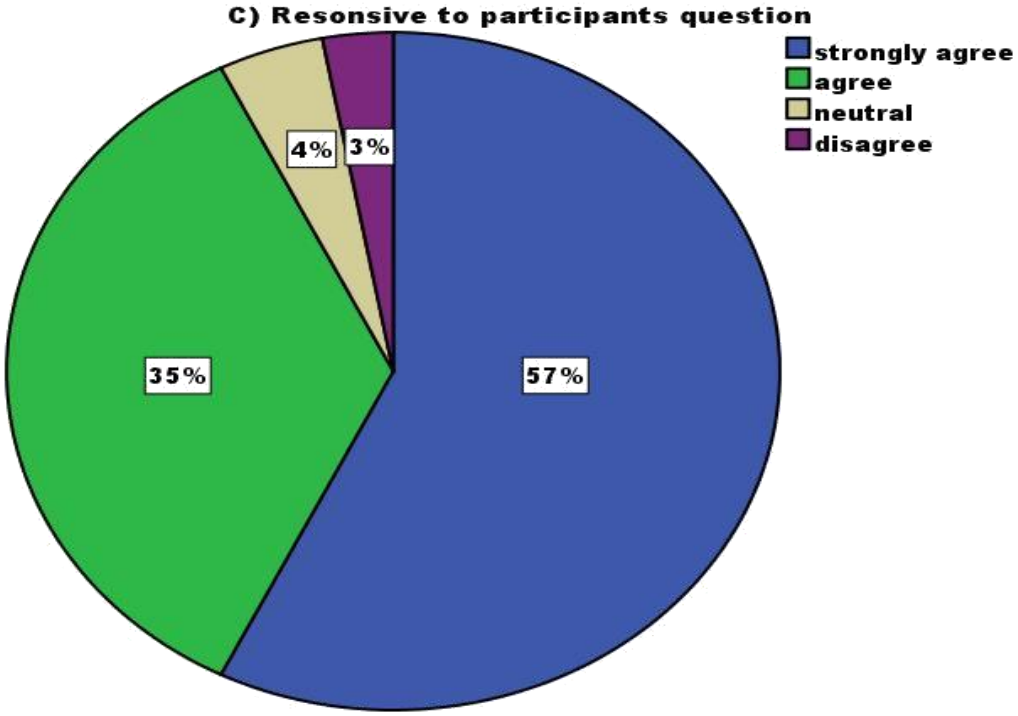
B) Giving appropriate time for doubt session

		Frequency	Percent
Valid	strongly disagree	1	1.5
	disagree	2	2.9
	neutral	13	19.1
	agree	19	27.9
	strongly agree	33	48.5
	Total	68	100.0



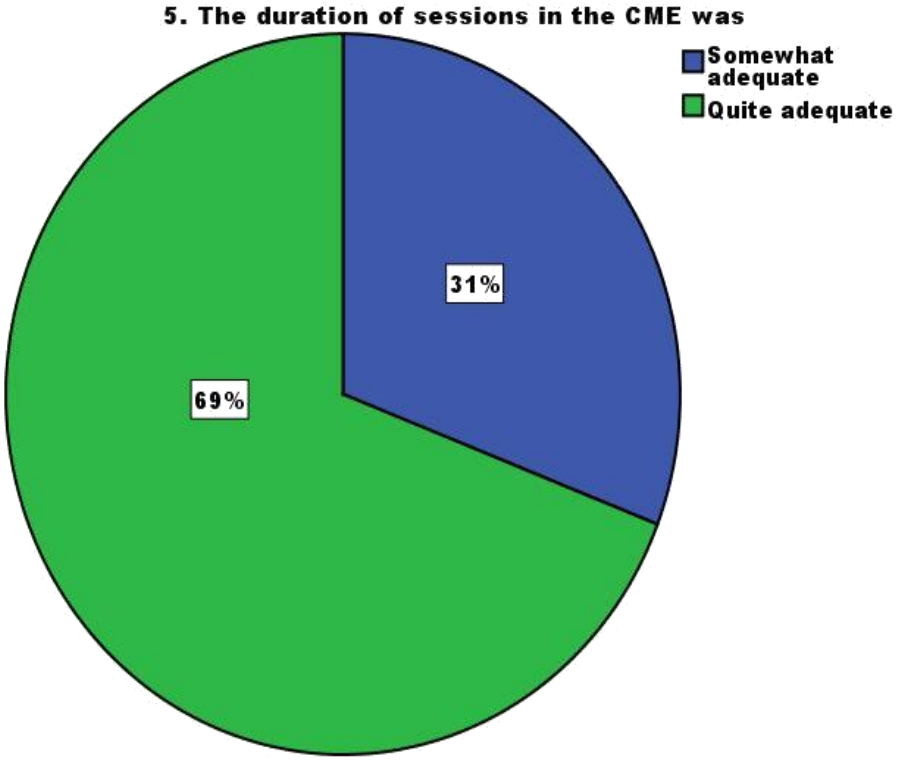
C) Responsive to participant's question

		Frequency	Percent
Valid	disagree	2	2.9
	neutral	3	4.4
	agree	24	35.3
	strongly agree	39	57.4
	Total	68	100.0



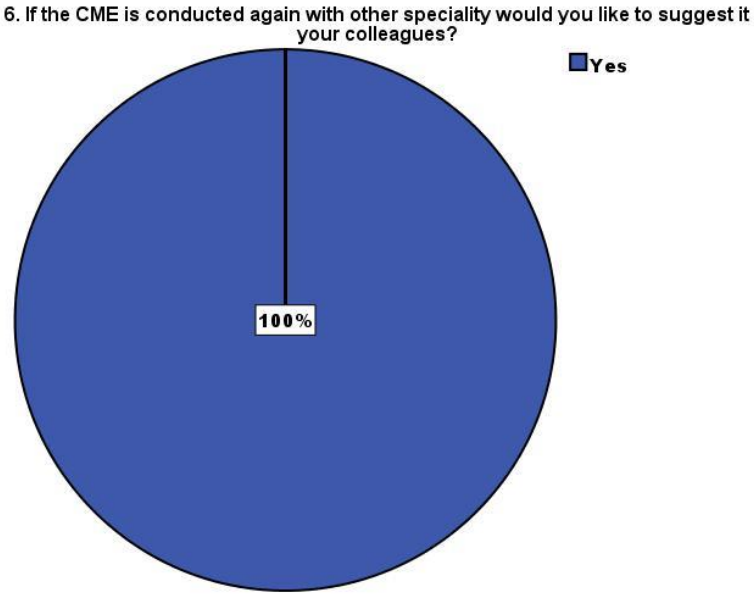
5. The duration of sessions in the CME was

		Frequency	Percent
Valid	Somewhat adequate	21	30.9
	Quite adequate	47	69.1
	Total	68	100.0



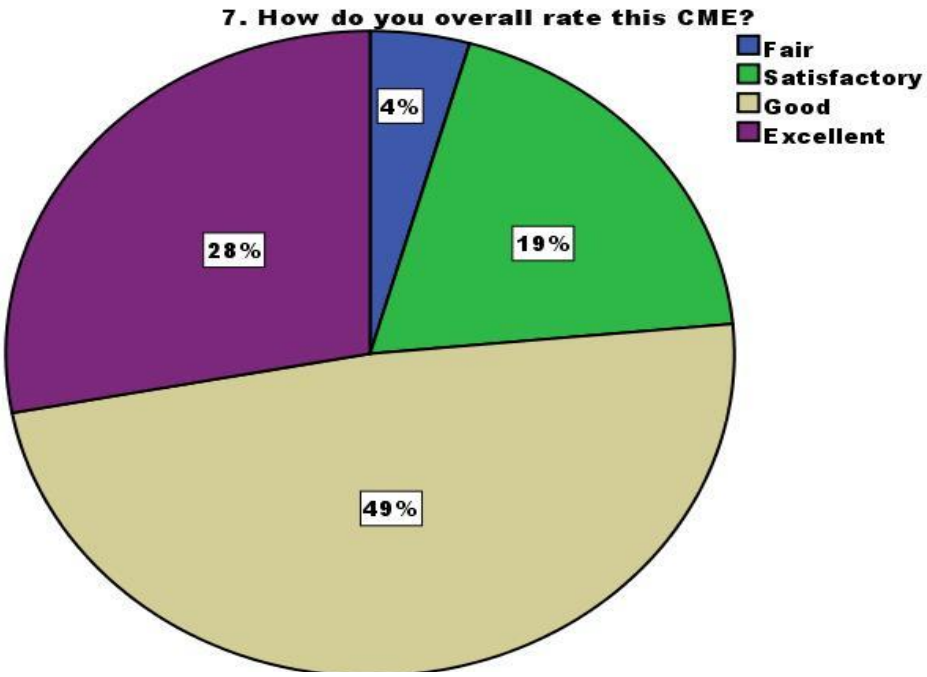
6. If the CME is conducted again with other speciality would you like to Suggest it your colleagues?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	68	100.0	100.0	100.0



7. How do you overall rate this CME?

		Frequency	Percent
Valid	Fair	3	4.4
	Satisfactory	13	19.1
	Good	33	48.5
	Excellent	19	27.9
	Total	68	100.0



3.8 Recommendations

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2. Time for the break should have been increased by 15 minutes more.
3. Food stall points should have been increased by 3 or more so as to utilize break time appropriately

4. References

[1] Bennett NL, Davis DA, Easterling WE Jr, Friedmann P, Green JS, Koeppen BM, Mazmanian PE, Waxman HS. Continuing medical education: A new vision of the professional development of physicians. Academic Medicine. 2000;75 (12):1167-1172.

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[8] [1]Arez Saviola, [2]Raddi Sudha A, [3]Metgud MC, effectiveness of planned teaching program on knowledge and skill in the use of partograph amog nurses working in maternity unit, South Asian Federation of Obstetrics and Gynecology, May-August 2009;1(2):57-59

5. Annexure

Pre-Test MCQ

Q1. Level of evidence one in medical field is obtained by:

a) Cohort studies

b) Case series

c) Randomized controlled trials

d) Case control studies

Q. 2. Clinical trial size depends on all of the following <u>except</u>

a) Level of significance

b) Power of study

c) Primary outcome

d) Secondary outcome

Q3. Diksha, 2 yrs old female child, known case of Celiac disease with failure to thrive presented to ER with acute watery loose stools of 3 days with h/o not passing urine since today morning. On examination she had cold extremities with HR of 168/min, weakly palpable PP and BP 76/44 mmHg. Her blood exam results showed pH/pO2/pCO2/HCO3/BE: 7.24/88/26/12/-8; Na/K/Cl 140/2/98; Serum Albumin 2.2 (normal = 4). Calculate the corrected Anion gap

a) 35.5

b) 30

c) 28

d) 38

Q4. What is the dose of epinephrine when given by endotracheal route in neonatal resuscitation?

a) 0.1-0.3 ml/kg of 1:1000 solution
b) 0.1-0.3 ml/kg of 1:10,000 solution
c) 0.5-1 ml/kg of 1:1000 solution

d) 0.5-1 ml/kg of 1:10,000 solution

Q5. What is the targeted preductal oxygen saturation at 3 minutes of life?

a) 60-65%
b) 70-75%
c) 80-85%
d) 90-95%

Q6. Which of the following statement is true:

a. Recurrent pneumonia is defined as 3 or more episodes of pneumonia in life.
b. Severe Recurrent Wheeze should be investigated as recurrent pneumonia.
c. Recurrent Pneumonia in one location can be because of cystic fibrosis.
d. Recurrent pneumonia in different locations should be investigated for congenital pulmonary malformation.

Q7: Enzyme replacement therapy is available for all of the following except

a) Gaucher's disease
b) Fabry's disease
c) Neiman Pick disease
d) Pompe's disease

Q8: A 2 year old girl presents with developmental delay, large head and dystonia. Which IEM is most likely?

a) Glutaric aciduria type 1
b) Gaucher's disease
c) Alexander disease
d) Sandoff disease

Q9: All of the following are used in treatment of hyperammonemia except

a) Sodium Benzoate
b) Carnitine
c) Arginine
d) Phenylacetate

Q10: Gross enlargement of the cardiac shadow on chest x-ray may be seen in all of the following except:

a) Tetralogy of Fallot
b) Transposition of great arteries with VSD
c) Pericardial effusion
d) Posterior mediastinal tumour

Q11. All of the following are true about Hirschsprung's disease except:

a) Often presents with neonatal large bowel obstruction
b) Results from absence of ganglion cells (Meissner's plexus) in the involved colon
c) A contrast-study will show dilatation of the aganglionic segment
d) Early treatment may involve rectal irrigation or an emergency colostomy

Q12: What is delta anion gap?

a) Anion gap – weak unmeasured anions

b) Anion gap – normal anion gap

c) Anion gap – Corrected anion gap

d) Delta anion gap is synonymous to Anion gap

Q13: A 29 weeks newborn with RDS has received surfactant and is on CPAP for respiratory support. The current settings are CPAP pressure 5 cm of water and Fio_2 30%. The baby has RR of 52 with retractions maintaining normal oxygen saturation. What is next appropriate step?

a) Increase Fio_2
b) Intubate and Ventilate
c) Administer second dose of surfactant
d) Increase CPAP pressure to 6

Q14: All of the following are true for trachea-esophageal fistula except

a) Often present prenatally with polyhydramnios
b) Most common is H type
c) Radiological evidence of gas in the stomach confirms the presence of distal TOF
d) Primary repair of the atresia is possible

Q15. A 30 weeks baby was born to eclamptic mother. Baby had laboured breathing at birth. On examination baby had respiratory rate of 66, was maintaining normal Spo2 at 45% nasal prong oxygen support. Although upper chest was lagging in inspiration, lower chest had marked retractions. On auscultation expiratory grunt was audible. Baby also had xiphoid retractions which was just visible but no flaring of ala nasi. Calculate the Silverman Anderson score.

a) 3
b) 4
c) 5
d) 6

Q16. The formula for calculating mid-parental height of a girl is

a. (Mother Ht + father Ht)/2 + 6.5

b. (Mother Ht + father Ht)/2 – 6.5

c. (Mother Ht + father Ht)/2 +13

d. (Mother Ht + father Ht)/2 - 13

Q17. The laser best suited for a portwine stain is:

a. Carbon dioxide laser
b. Pulsed dye laser
c. Erbium Yag laser
d. Neodymium Yag laser

Q18. Atopic dermatitis is associated with mutation in the following gene:

a. Filaggrin
b. Connexin
c. Keratin K 5
d. Keratin K 14

Q19. The topical cream for molluscum contagiosum is:

a. Imiquimod
b. Pimecrolimus
c. Calcipotriol
d. Acyclovir

Q20. A five year old boy, diagnosed as beta- Thalassemia major is on regular blood transfusions since two years of age. Serum ferritin is >3300 ng/ml. The chelator of choice will be:

a. Desferrioxamine
b. Deferiprone
c. Combined A + B
d. Deferasirox

Q21. Which of the following is a cause of hyperchloremic metabolic acidosis?

A. Diarrhea
B. Diabetic ketoacidosis
C. Shock
D. Chronic renal failure

Q22. Which of the following presents with a combination of refractory rickets, normal blood level of calcium and hypercalciuria?

a. X linked hypophosphatemic rickets
b. Autosomal recessive hypophosphatemic rickets
c. Vitamin D deficiency
d. Dent's disease

Q23. The upper: lower segment ratio is 1 at what age

a. Birth
b. Three years
c. Seven years
d. Ten years

Q 24. All of the following reduce spasticity in cerebral palsy except

a) Baclofen
b) Benztropine
c) Botulinum toxin
d) Diazepam

Post-Test MCQ

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f) Case series

g) Randomized controlled trials

h) Case control studies

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NATIONAL BOARD OF EXAMINATIONS

Feedback form for the participants

-You are requested to give your views on the various aspects of this CME.

-Your reaction will be of great value to us in terms of improving the CME in the future.

-You are requested to give honest response.

Dr.B.Bharat

Research associate

Training & monitoring

National Board of Examinations

On a scale of 1-5 where 1 is strongly disagree,3 is neither agree or disagree (neutral) and 5 is strongly agree, please circle appropriate answer.

1. The CME venue was:

A) Easy to reach & Well located	1 2 3 4 5
B) Appropriate for CME purpose	1 2 3 4 5
C) Food & refreshment were adequate	1 2 3 4 5

Comments:_____
_____

2. The CME content was:

A) Relevant to your need

B) Comprehensive

C) Easy to understand & useful

Comments:_____
_____

4. The CME was:

A) Well structured & timed

B) Breaks were appropriate

Comments:_____
_____

5. The experts were:

A) Well- prepared

B) Giving appropriate time for doubt session

C) Responsive to participants' questions

Comments:_____
_____

6. The duration of sessions in the CME was

A) Inadequate

B) Somewhat adequate

C) Quite adequate

7. What did you like best about this CME?

_____

_____

8. What did you like least about this CME?

_____

_____

9. If the CME is again with other specialty would you like to suggest it to your colleagues?

A) Yes

B) No

10. How do you overall rate this CME?

A) Poor

B) Satisfactory

C) Good

D) Excellent

Comments :

_____

_____

Thank you for participating, we appreciate your feedback