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Factors affecting attendance rate to continuing medical education activities in health directorate- Iraq 2013

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Abstract
Background: attending to continuing medical education (CME) activities in Kerbala health directorate affected by different motivations & barriers; individual, structural and organizational. So assessment the attending rate will be helpful to highlight on these factors.**Objectives**:(1)Assessment the attending rate into CME activities in Kerbala health directorate. (2) barriers & motivations to physicians acquiring the skills and engaging in the CME. (3) identify a general suggestions to improve the attendance and propose solutions to better prepare physicians for ongoing self-assessment and lifelong learning.**Method**: semi-structured descriptive cross sectional study carried out from 22nd of June to 30th of December 2013 at kerbala health directorate, the study sample was 203 specialist doctors, from 6 hospitals &6 administrative departments. Statistical Package for Social Science (SPSS) program version 17 and chi square test used for data analysis, and p-value= 0.05 considered statistically significant. **Result**:94.1% was regular & irregular attending rate, males more regular than females, hospital working more regular attending, as long as the physicians were approached CME activities with; different strategies, external motivations, uses multiple new technologies to learn, setting curriculum, presence of assessment & evaluation, fixed policy, budget, minimize structural & organizational barriers the attending rate would be increased.**Conclusion:** high attendance rate with poor efficiency & competence of specialist doctors in Kerbala health directorate into CME, participation need mixed external & internal motivating factors, different approaches, well organized planning activities by setting curriculum, assessment, evaluation, budget, fixed policy, minimize managerial barriers with suitable timing, place & provide incentives.
Key words: assessment, attending rate, motivations & barriers, postgraduate, CME, policy, lifelong learning, medical educator

1. Introduction.

Medicine is witnessing a continuous and tremendous progress in all fields. The enormous strides in the understanding of the bases of diseases have permitted more rational bases for the diagnosis and management of various disorders. New diagnostic tools and new therapies are continuously emerging and contributing to improved patient care and management, and raising the hope for more specific and curtain therapy for many disorders.

1.1 Training is one of the most important developmental activities of any institution of whatever nature, type of work and competence, where is the best way to prepare and develop human resources and improve their performance. Continuing medical education, continuing health education & continuing education for all supporting staff is a right out of health personnel rights have to applied in all Iraqi health institutions.[1]

1.2 Continuing medical education (CME) regards the stand for the high quality of medical staff & health service. The process by which physicians keep their knowledge-based current typically is referred to as "lifelong learning." And the requirements for lifelong learning had done through the medical education continuum (CME) [2].

Medical education regulatory bodies describe lifelong learning term complex and multidimensional. A recent definition, states that lifelong learning is a: "concept that involves a set of self-initiated activities (behavioral aspect), and information seeking skills (capabilities) that are activated in individuals with a sustained motivation to learn and the ability to recognize their own learning needs."[2]

Fletcher summarizes the purposes of CME as being: "To improve the quality of patient care by promoting improved clinical knowledge, skills and attitudes, and by enhancing practitioner performance, to assure the continued competency of clinicians and the effectiveness and safety of patient care, and to provide accountability to the public"[3]

1.3 In Iraq public health law No. 89 in 1981 state: the responsibility of the Ministry of Health has dissemination of health education and vocational education, raising the scientific level of the workers, development of medical studies and encourage scientific research in health, environmental and technical issues.[1]

The 1st symposium was held in Nineveh province in December 1995 outstanding efforts by dr. Iyad Hassan al ramedhani, it was starting out CME programme, and then seminarshad been run annually to recognize the basics of the program and its application.[1]

Although there is a national policy in ministry of health in Iraq, but it is voluntary not mandatory. CME should be both an individual and also a collective obligation of the profession; in order to promote and make it effective, each member state must provide the means of making continuing medical education available to all physicians[4].

therefore highlighting on physician attendance to CME activities & determine the percentages of drives to attend& obstacles reveals the effectiveness of programme in the learning process & its impact on development ,change in their knowledge, attitude & practice as adult learners to presenting high quality health care.

Research Objectives:

In this study the chosen group of physicians as specialists manages the process of continuing medical education through need assessment, analysis and synthesis of relevant information.

Aim of it:

(1) Assessment the attending rate into CME activities in Kerbala health directorate.
(2) Select the possible barriers & motivations to physicians acquiring the skills and engaging in the CME.
(3) Identify a general suggestions to improve the attendance and propose solutions to better prepare physicians for ongoing self-assessment and lifelong learning.

2. Methods and study design:

2.1.study design : The study used the semi-structured(questionnaire + interview) descriptive methodology in approaching the research subject using a cross sectional study to assess the Attending rate as dependent variable with other independent variables to participate into CME activities in kerbala health directorate.

2.2 The study setting: in Kerbala health directorate

2.3 The study duration: for the period from 22nd of June 2013 and was finished at 30th December 2013.

2.4 The study sample: Populations were specialist postgraduate doctors, total number of specialist doctors in Kerbala directorate are "301". The sample size are "203" out of "208" have been chosen.

2.5 ethical considerations: the study approved by ethical and scientific committee of the college and all participance were agree to study methodology .

,(5 questionnaires were neglected because it were not properly filled).

2.6 Questionnaire was designed according to international guideline adapted from (How to design a questionnaire Wai-Ching Leung) & revised and supervised by committee in the department of community medicine al-kindy college of medicine& it was involved:

Type of specialty;(29 types was classified in 4 major groups; surgeons, physicians, pediatricians, gynecologist & obstetricians) in diploma, master & board degrees.

Gender; (36 females and 167 males = 203).

Site of work; (6 hospitals; 4 in the center of Kerbala and 2 in the rural districts+ 6 administrative departments in the health directorate).

Years since getting specialty degree; less than 5 years, from 5-10 & more than 10 years.

Attending rate: Regular=50 credit hours in 1 year or more, Irregular= less than 50 credit hours in 1 year & Never attend= less than 10 credit hours in 1 year (according to booklet of CME credit hours from ministry of health in Iraq 2013).

Participation in CME; either participant, conductor or both

Level of activities: activities held in Kerbala (health directorate or other CME provider), activities of the ministry of health (in Baghdad or other health directorates in other provinces, abroad (overseas whatever is CME provider) or mixed 2 or all 3 levels were mentioned above.CME events involved: lectures, seminars, conferences, courses, daily morning reports, grand round tours, scientific meetings, e- learning approach.

Date of last attendance : explain how often are doctors attend to CME; within days, months or years.

Motivation factors: *internal motivation* factors include; improved knowledge, interest, contact with colleagues, professional need& self-esteem &personal ideal, *external motivation* factors include quality of speaker, subject of activity, incentives (food, location, certificate), educational need& job security, adjusting old allowance & suitable timing or mixing both internal & external.

Uses of new technologies: classified as; *external* or "Live" Activities; Internet + video conference (e-learning), *internal* Activities; Mannequin + Simulation &*enduring Materials*; Videotape & CDs or mixing of 2 or all types of activities were mentioned above.

Uses of classical activities; lectures, bed side teaching (BST) & both.

Involve doctors from outside (overseas)as speaker into CME.

Is CME activity setting in curriculum of your department: is there annual or quarterly plan or schedule for CME activities in your department?

Is there assessment or evaluation in mid or end of the activity: were the CME activities involved assessment or evaluation in the mid or the end?

Is CME activity fixed or relevant policy? Personal policy for each doctor toward CME activities.

Is there budget for the unit in which you operate? Is there budget to set up the activities of CME in the unit.

Did you use portfolio to collect information & reflection ? booklet from ministry of health in Iraq distributed to all doctors worked at health institutions.

Barriers to attendance CME were classified as; *Individual* as lack of time, *Structural* as unsuitable place & time, lack of incentives, lack of feedback & reevaluation, not affecting my practice, un appropriate methods of CME &*Organizational* as managerial problems.

What are your suggestions to encourage the attendance to CME activities: list of suggestions involve the training policy in the ministry of health and CME planning.

Participant surveyed by semi- structured interview, time of interview about 15 minutes, pilot study was applied on 12doctors out of the sample, some words meaning was unfamiliar to them & explained later on during the interview. interview was took place with each doctor at his site of work , a group of them at his private clinic. the questionnaires was distributed to the doctors and collected after they finishing it.Their acceptance to participate were taken as their consent to be part of the study. Participation level of doctors in CME activities in the last 2 years .

2.7 Data analysis:

Statistical Package for Social Science (SPSS) program version 17 and chi square test used for data analysis , and p-value of less than 0.05 considered statistically significant.

3. Discussion:

3.1 Attending rate of specialist doctors in Kerbala directorate to different types of CME activities seems to have different levels as in table- 4-in which(23.2%) regular, (70.9%) irregular &(5.9%) never attend at all, such self-directed learning goes with voluntary national policy of CME in Iraq ministry of health[4] ,like other countries as Turkey[9] where CME not compulsory policy. There are factors affected on the accessing CME.

Discussing Table-5- shows There are no barriers to hamper from the participation into CME. In a study showing surgeons in Sri Lanka did not always guarantee high participation in CME activities this may be due to the fact that surgeons have barriers such as time away from a practice to attend CME activities.[32]

3.2 Table-6-highly significant relation (0.010 < 0.05) between attending rate & gender. Males have the highest regular attendance rate while females have the highest irregular attendance rate; this is fit with the study that female doctors in Pakistan & Australia faced limiting factors to participate in CME, Personal characteristics of female doctors can influence their decisions and ability to access appropriate CPD activities.[27,34]

3.3 At table-7- notice highly significant relation (.004<.05) between attending rate & Site of work. Hospital work sites doctorshave more regular attendance than administrative departments sites doctors into CME. This is comparable with the core of CME meaning : it used to improve clinical practice outcomes& principally encompass to clinical domain by expanding the knowledge and skill base required by doctors.[6, 35, 36, 37]

3.4 Table-8-Attending rate and years since getting specialty degree. . No significant relation between the older & the newer specialists, while a study by Goulet et al mentioned that older physicians maintained their clinical competence by participating in different continuing medical education (CME) activities when compared with newer physicians.[28,38] A study in Australia showed that newer doctors spent more time than older doctors on CME activities.[32]

3.5 DiscussingTable-9-with highly significant relation (.000<0.05) between attending rate & participation; specialist doctors who attended as both participants & conductors have the highest regularrate & the lowest irregular rate, followed by as participants & the least as conductors. This goes withPhysicians use multiple learning strategies to meet the needs in their professional practice.[11]Teaching is a profession requires education and training,[39] physician involvement in the planning and teaching is critical & those who participate in the education of other physicians need a greater support.[6] A study in Israel shows Factors associated with higher life learning scores included involvement in teaching& still encouraging physicians to engage in academic activities can lead to positive outcomes.[40]

3.6 Table-10- find highly significant relation(.000< .05) between attending rate & level of CME activity; physicians who attended in all activities held in kerbala province , ministry of health & abroad have the highest rate in regular attendance & the lowest irregular attendance into CME. Followed by those who attended CME at MOH & abroad, the lowest rate whose attended at kerbala health directorate. This is unfit with workplace activities is more preferred while CME report of the council on Medical Education states workplace climate for practicing physicians has been found to be related to motivation for learning.[2] Specialists seeking for formal CME activities which organized and presented by an accredited CME Provider.[12]Workplace learning means *finding solutions to clinical problems when they arise, or soon after, with minimum effort which it is hard to achieve*, if doctors only look up answers to questions arising in their own practice, their knowledge will depend on the local case mix this is called Parochialism.[41]

3.7 At Table-11-Specialist doctors who attended into CME activities on daily basis have the highest regular rate & lowest irregular rate than those who attended in months, while those attending in years almost were irregular. This goes with voluntary & optional attendance taking into consideration the barriers to participating CME .Result reversing to a study in

New Zealand ;perceived high workload and stress lead to lack of time& de-motivation to attending CME/CPD activities .[23]

3.8 Table- 12-showshighly significant relation (.000< 0.05) between attending rate & motivation factors; highest regular rate with external motivating factors followed by mixed(internal + external) factors & the lowest rate with internal motivating factors, while the highest irregular attending rate with internal factors then mixed factors & the lowest with external factors. It is matching with a study In countries which dependent voluntary CME system like Pakistan, factors associated with the educational activity, relevance, cost & incentives were the main consideration& reversing a study in Australia where the compulsory CME has been applied in 2010,opportunity to keep up to date with the latest developments the main reason for accessing CME/CPD.[25, 26, 34] Farooq (2004) states: "One of the most important reasons given for CME/CPD is that it allows doctors time to discover and fulfill learning needs, increase job satisfaction and improve self-esteem". [3]

At Figure-1-when compare it with a study in Pakistan [27] the result obvious in figure - 4,5- :

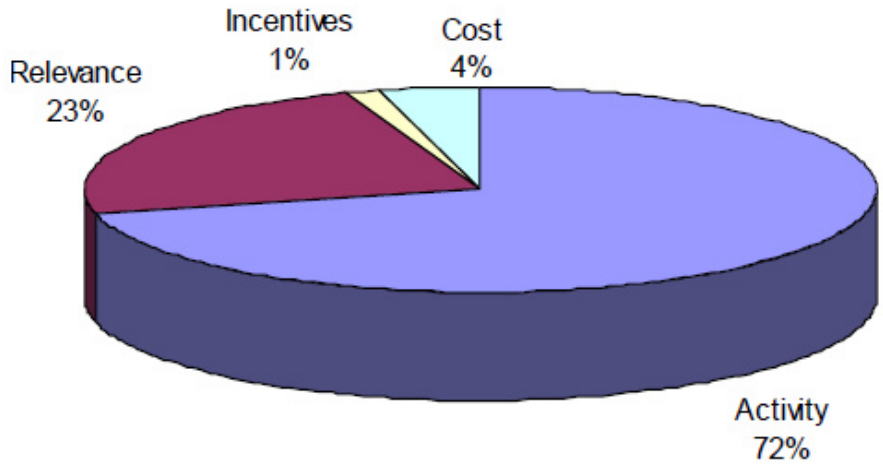

Figure 4: Motivation to attend educational activitiesin Pakistan

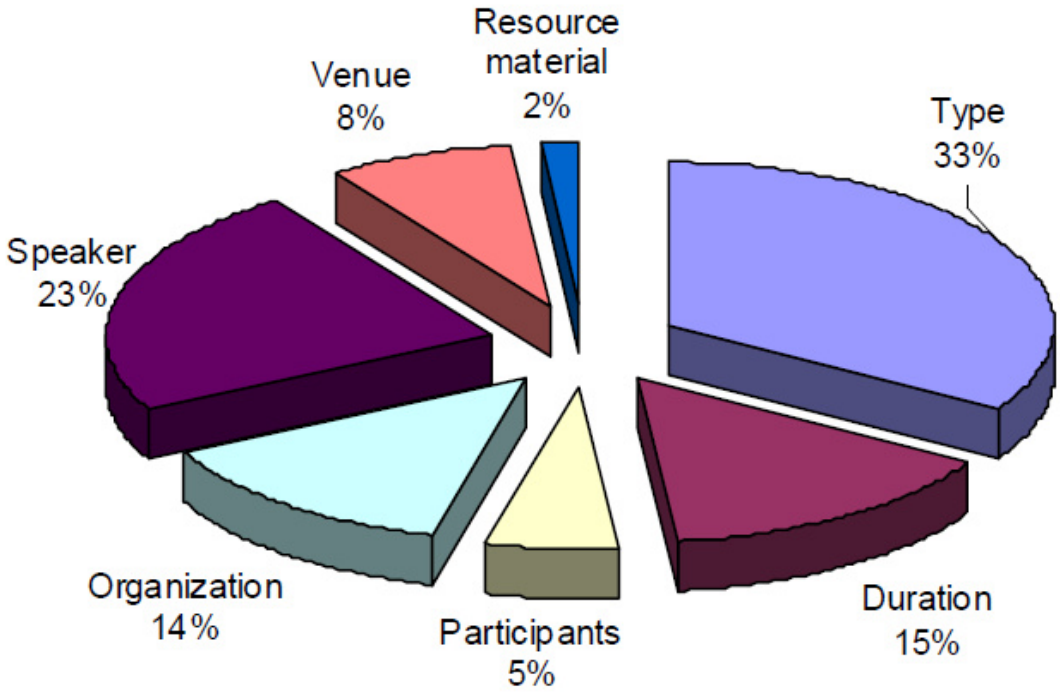

Figure 5: Factors associated with educational activity in Pakistan

3.9 At Table-13- highly significant relation (.000 < 0.05) between attending rate and use of new technology. The highest regular attendance rate used internal activities then mixed use activities followed by external activities & enduring materials while highest irregular attendance was used enduring materials followed by external activities then mixed use & lastly internal activities . It is rhyming with studies encourage interactive sessions included those using techniques to enhance physician participation, such, role play, hands on- training & it has consistently been shown to be effective for learning in CME.[42] while formal CME activities such as lectures have little impact on practice.[5,31] Theoretically, simulation-based education should be well suited for CME training.[43]physicians use multiple learning strategies to meet needs in their professional practice because a single learning opportunity may not be very effective in changing behavior, but a number of interventions in combination may prove very successful.[6,11,30]The study result is contrary to uses of internet (e-learning) , videoconferences& enduring materials (videotape & CDs) as motivation & success in education in spite of ease of access, less costly, it also leaps across hostile environments and locations otherwise difficult to reach [29,44].

3.10 Table-14-notice highly significant relation (.000<0.5) between attending rate and use of classical method. Highest regular attendance with specialists whose participating in both lectures & bed side &the least irregularly while those who attended lectures alone or bed side alone approximately equal in attending rate. Didactic sessions were defined as predominantly lectures or presentations with minimal audience interaction or discussion.[5,31] All studies confirm that didactic lectures by them selves' mechanism may increase physicians knowledge,but do not play a significant role in immediately changing physician performance or improving patient care .In contrast, a studies documented that interactive techniques generally more effective changing. [18,20,23, 31,33]Bedside teaching (BST)it is a fundamental skill for the practicing physician, defined as *the direct interaction between the physician, trainee, and patient or patient's family to elicit a history, perform a physical examination or procedure, and discuss the diagnosis and best therapeutic approach.* [45] The study's result agree with the recent study in 2012-2013 "a renewed emphasis on BST seems not only appropriate but necessary" .In the words of the famous Sir William Osler: "To study the phenomenon of disease without books is to sail an uncharted sea, while to study books without patients is not to go to the sea at all."[45]

3.11 At Table-15- attending rate and involve doctors from outside (overseas). The highest regular attendance rate with the presence of doctors from abroad (overseas) or not. This is convenient with studies that emphasized on the role of expert speaker as motivation to prompted the attendees to come to the CME activity[10,27,34,46]

Table-16- highly significant relation (.000 <0.05) between attending rate & is CME activities setting in curriculum of your department?: the highest regular rate when there is a curriculum setting . The curriculum statements are *indicative of what is current and offer a vision for the future*. The knowledge, skills and values identified in each of the curriculum statements are relevant to all aspects of the curriculum framework and physicians are encouraged to integrate key critical thinking, critical appraisal and research skills with their role as professional practitioners.[5,46] The result matching with the Australian study on personal motivations shows ; a number of personal motivations that could determine whether a doctor would attend an educational event. These included that it was a topic of particular interest to the individual, a requirement of a particular curriculum.[34] In many parts of the developing world, Lack of structure and regulation may even be more dangerous than lack of educational activities.[6,13]

3.12 Discussing Table-17-highly significant relation (.000< 0.05) between attending rate & Is there assessment or evaluation in mid or end of the activities : highest regular attending rate when there is assessment or evaluation during or at the end of CME activity. The Oxford Dictionary defines assessment as '*the action of assessing'. Here 'assessing' implies evaluating the nature, ability or quality of someone or something*. Evaluation, on the other hand, is defined as '*forming an idea of the amount, number or value'*.[47] This is matches with a study state; Administrators, residency directors, program directors, course directors, faculty and staff are always looking for ways to improve their program evaluation processes.[49] All studies emphasized that both evaluation & assessment are essential aspects of the creation of an effective CME programmer. [3,11,46,48,49,50]

3.13 AtTable-18-highly significant relation (.000< 0.05) between attending rate &Is CME activity fixed or relevant policy: specialists with fixed policy have the highest regular rate. This is mean doctors committed with fixed policy have a personal responsibility & accountability to participate in continuing professional development programmers, consisting of both formal CME and quality improvement procedures. Professional development, continuously striving to enhance the competence necessary to meet the needs of patients and societies served, is a legal and ethical obligation.

3.14 Table-19- highly relation (.000< 0.05) between attending rate &if there is budget in the unit for setting CME. Highest regular attending rate with presence of budget. One of priorities in planning & implementation a CME activity establish an activity budget which includes projected revenues and expenses.[48,51]Budgetary considerations include room rental, audio-visual equipment rental, meals, transportation and lodging for speakers. Not all speakers require an honorarium, however, this should be known in advance to properly budget for

.Adequate budget estimate, Time & staffing all reflect on our ability to conduct needs assessment, provide an important step of CME accreditation& assuring safety physical & psychological environment to get high quality outcome.[3, 34,52]

3,15 Table-20- highly significant relation (.000< 0.05) between attending rate &Did you use portfolio to collect information & reflection: highest regular rate with possessing portfolio to collect information & registered activities.CME/ CPD should be planned and individually tailored. Learning portfolios a *comprehensive record of learning events, along with evidence of outcomes. It may contain logbooks, practice research and proposals, clinical data, "jottings" (ideas, thoughts, insights, challenges) and a reflective commentary in which the individual identifies what has been learned* . portfolio-based learning promotes an increase in self-knowledge and confidence in relation to individual learning preferences and needs (motivating factor).[53]

DiscussingTable-21-showshighly significant relation (.000< 0.05) between attending rate & barrier factors. Regular attendance were 100% have no barriers, while the highest irregular rate with the structural barriers and the highest never attending rate with the organizational barriers. Majority of studies concord on lack of time is significant barrier to attend CME/CPD activities with increasing physicians workloads, falling reimbursement, and the increase in dual-physician families. [5,6,23,26,30,34,36] Result resemble a study in Saudi Arabia kingdom Hospitals state managerial and administrative problems to be among the greatest challenges facing CME; manager's lack of awareness about the importance of staff development has a significant impact on CME, including ambiguity about the budget allocated learning programs, the poor status of the hospital library, and the apparent lack of capability to plan a competent programmed for the staff.[3] A study in Sirlanka state that majority of general practitioners trainees indicated financial constraints preventing them from attending CME programs, indicated difficulty in travelling to the CME destination .[5,32] In Pakistan in addition to lack of time , lack of interest, finances, lack of incentives emerge as the main barriers in attending CME/CPD activities, (12%) of respondents identified organizational culture as a barrier such as difficulty being nominated or obtaining sponsorships from their institutions for CPD.[26]Australian study shows The financial impact of accessing CME/CPD activity can be quite significant, Costs to attend (e.g. registration fees) and other costs to participate, including travel and accommodation.[34] Lowering barriers is motivating factor:[41]

3.16 At Figure-2-when compare it with a study in Pakistan the result obvious as in figure -6-:

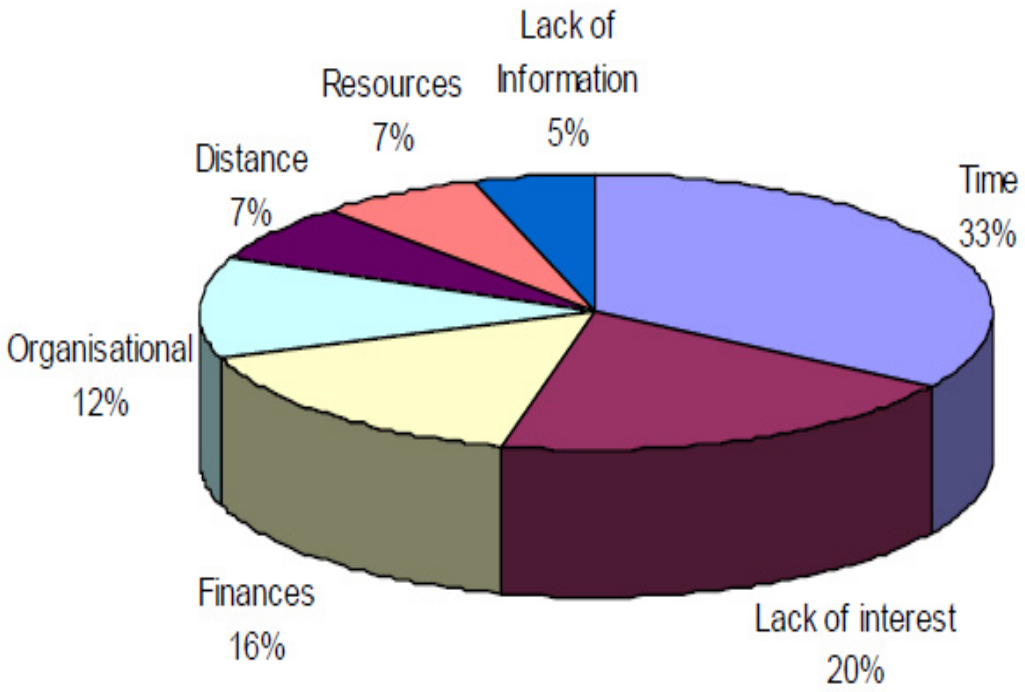

Figure-6-Barriers towards attending educational activities in Pakistan

3.17 Discussing Table-22-shows highly significant relation (.031< 0.05) between the attending rate &Suggestions to increase attendance to CME activities. The highest never attending rate suggested; provide system check up to get promotion & up grading while the highest irregular rate suggested; make CME activities more relevant to improve practice and the highest regular rate suggested all the above plus provide online sessions to facilitate the communication& provide incentives (food, credentials).

4. Conclusions:

1. high attendance rate with poor efficiency & competence of specialists doctors into CME activities in Kerbala health directorate.
2. Engagement need: fixed policy, curriculum, budget, assessment& evaluation, planning ,mixed external & internal motivation factors, uses multiple new technology.
3. suggestions to improve the attendance to CME multifarious among change health policy toward fixed & obligatory attendance with planning CME events to be more effective & formal and facilitate the accessing to the educational processes.

5. Recommendations:

Stating fixed policy with compulsory system of participation depending recertification , revalidation & evaluation every 5 years, it is already applied in the most developed countries.
CME planning is required to make need assessment and to introduce adult learning tools.
Uses the new technologies which had been established as more effective in learning process.
There is a need to conduct similar researches in CME involve the rest medical groups as general practitioners & interns ,with another types of studies concerning CME & CPD programs

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Results:

Table:-4- The frequency & percentage of Attending rate;

	Frequency	Percent	Valid Percent	Cumulative Percent
Regular	47	23.2	23.2	23.2
Irregular	144	70.9	70.9	94.1
Never	12	5.9	5.9	100.0
Total	203	100.0	100.0	

Table-5-

Attending to CME activities & type of Specialty

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never attend		
type of Specialty	Surgeon	Count	17	48	3	68	.137
		% of Total	25%	70.6%	4.4%	100%	
	Physician	Count	14	53	6	73	
		% of Total	19.2%	72.6%	8.2%	100%	
	Gyne.& Obstetrician	Count	2	22	1	25	
		% of Total	8%	88%	4%	100%	
	pediatrician	Count	14	21	2	37	
		% of Total	37.8%	56.8%	5.4%	100%	

Table-6-

Attending to CME activities & Gender

			Attendance to CME activities			Total	P-value
			Regular	Irregular	Never		
Gender	Females	Count	2	33	1	36	.010
		% of Total	5.5%	91.7%	2.8%	100%	
	Males	Count	45	111	11	167	
		% of Total	27%	66.5%	6.5%	100%	

Table-7-

Attending to CME activities & Site of work

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
Site of work	Hospitals	Count	45	120	7	172	.004
		% of Total	26.2%	69.8%	4%	100%	
	Administrative Departments	Count	2	24	5	31	
		% of Total	6.5%	77.4%	16.1%	100%	

Table-8-

Attending to CME activities & years since getting specialty degree

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
years since getting specialty degree	<5 years	Count	8	48	6	62	.238
		% of Total	13%	77.4%	9.6%	100%	
	5-10 years	Count	11	36	2	49	
		% of Total	22.4%	73.5%	4.1%	100%	
	> 10 years	Count	24	54	4	82	
		% of Total	29.2%	66%	5%	100%	
	Not answered	Count	4	6	0	10	
		% of Total	40%	60%	.0%	100%	

Table-9- Attending to CME activities & participation / conductors

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
Participation or conductors	Participant	Count	24	85	0	109	.000
		% of Total	22%	78%	.0%	53.7%	
	Conductor	Count	3	14	0	17	
		% of Total	17.5%	82.5%	.0%	8.4%	
	Both	Count	19	43	0	62	
		% of Total	30.6%	69.4%	.0%	30.5%	
	Not answered	Count	1	2	0	3	
		% of Total	33.3%	66.7%	.0%	1.5%	
	Never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-10- Attending to CME activities & levels of CME activities

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
Levels of CME activities	at Kerbala directorate	Count	21	82	0	103	.000
		% of Total	20.4%	79.6%	.0%	100%	
	at MOH	Count	4	12	0	16	
		% of Total	25%	75%	.0%	100%	
	Abroad	Count	4	12	0	16	
		% of Total	25%	75%	.0%	100%	
	Mixing(all of the above)	Count	18	37	0	55	
		% of Total	32.7%	67.3%	.0%	100%	
	Not answered	Count	0	1	0	1	
		% of Total	.0%	100%	.0%	100%	
	Never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-11-Attending to CME activities & Date of the last attendance

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
Date of the last attendance to CME activities	Within Days	Count	29	53	0	82	.000
		% of Total	35.4%	64.6%	.0%	100%	
	Within Months	Count	11	64	0	75	
		% of Total	14.6%	85.4%	.0%	100%	
	Within Years	Count	1	10	0	11	
		% of Total	9.1%	90.9%	.0%	100%	
	Not answered	Count	6	17	0	23	
		% of Total	26.1%	73.9%	.0%	100%	
	Never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-12-

Attending rate & Motivation factors

			Attendance to CME activities			Total	P=Value
			Regular	Irregular	Never		
Motivations factors	Internal factors	Count	8	29	0	37	.000
		% of Total	21.6%	78.4%	.0%	100%	
	External factors	Count	3	5	0	8	
		% of Total	37.5%	62.5%	.0%	100%	
	Mixing(all of the above)	Count	33	109	0	142	
		% of Total	23.2%	76.8%	.0%	100%	
	Not answered	Count	3	1	0	4	
		% of Total	75%	25%	.0%	100%	
	Never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

- Internal motivation = improved knowledge, interest, contact with colleagues, professional need& self-esteem &personal ideal.
- External motivation = quality of speaker, subject of activity, incentives (food, location, certificate), educational need& job security, old allowance & suitable timing.

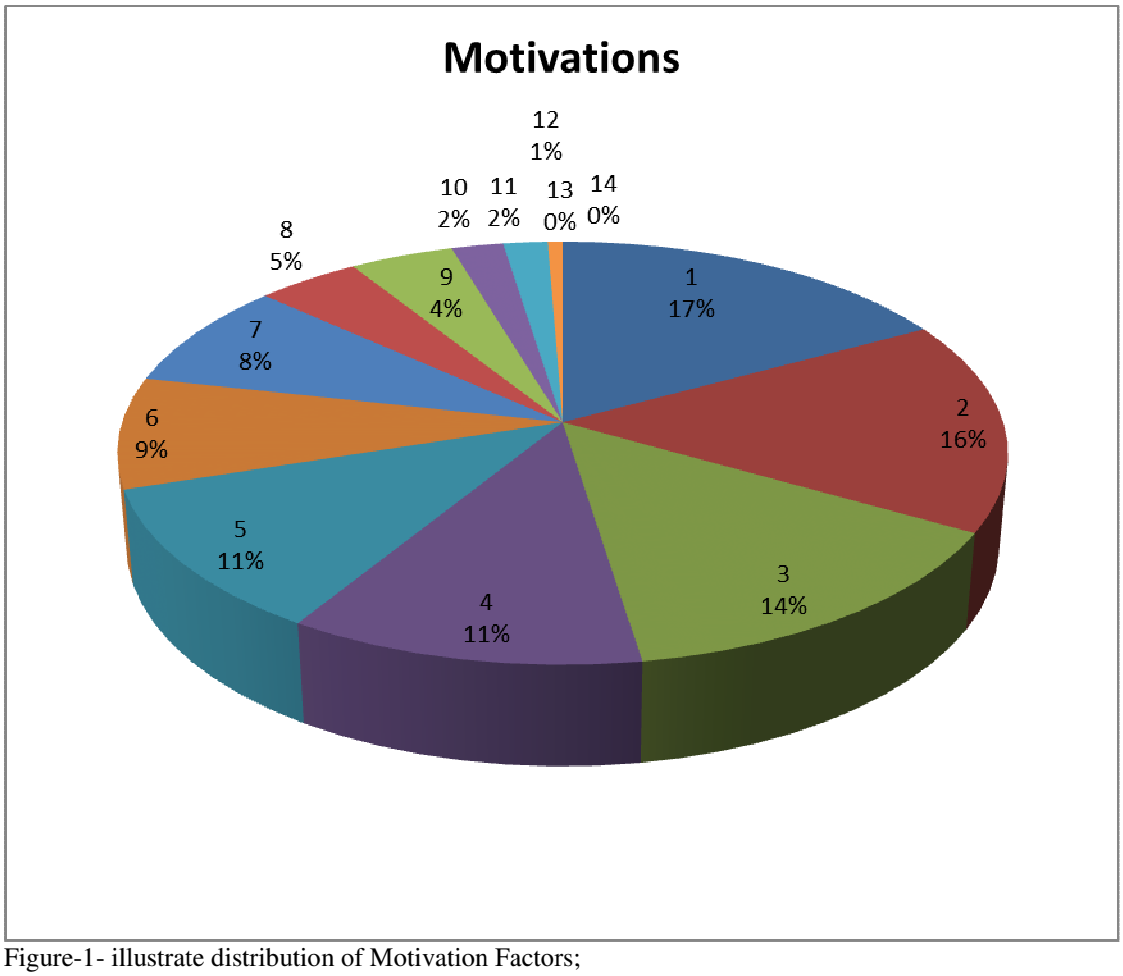

Figure-1- illustrate distribution of Motivation Factors;

Improved knowledge=17%

interest=16%

subject of activity=14%

contact with colleagues=11%

professional need=11%

quality of speaker=9%

suitable timing=8%

educational need &job security=5%

self-esteem& personal ideal=4%

incentives(food, location, certificate)=2%

old allowance=2%

never attend=2%

not answered=1%

Table-13-

Attending rate& Uses of new technology

			Attendance to CME			Total	P-Value
			Regular	Irregular	Never		
Uses of new technologies	External activity	Count	13	50	0	63	.000
		% of Total	20.6%	79.4%	.0%	100%	
	Internal activity	Count	3	6	0	9	
		% of Total	33.3%	66.7%	.0%	100%	
	enduring materials	Count	6	25	0	31	
		% of Total	19.3%	80.7%	.0%	100%	
	Mixing(all of the above)	Count	24	61	0	85	
		% of Total	28.2%	71.8%	.0%	100%	
	Not answered	Count	1	2	0	3	
		% of Total	33.3%	66.7%	.0%	100%	
	never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

- External or "Live" Activities; Internet + video conference (e-learning).
- Internal Activities; Mannequin + Simulation
- Enduring Materials; Videotape & CDs

Table-14-

Attending Rate&Uses classical methods

			attendance to CME activity			Total	P-Value
			Regular	Irregular	Never		
Uses of Classical methods	Lectures	Count	32	110	0	142	.000
		% of Total	22.5%	77.5%	.0%	100%	
	Bed Side	Count	2	7	0	9	
		% of Total	22.2%	77.8%	.0%	100%	
	both	Count	13	26	0	39	
		% of Total	33.3%	66.7%	.0%	100%	
	Not answered	Count	0	1	0	1	
		% of Total	.0%	100%	.0%	100%	
	never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-15-

Attendance to CME activities & Involve doctors as speaker from outside (overseas)

			attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
Involve doctors from outside as speaker	Yes	Count	26	75	0	101	.000
		% of Total	25.7%	74.3%	.0%	100%	
	No	Count	12	43	0	55	
		% of Total	21.8%	78.2%	.0%	100%	
	Not answered	Count	13	22	0	35	
		% of Total	37.1%	66.9%	.0%	100%	
	Never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-16-

Attending to CME activities & Is CME activities setting in curriculum of your department

			Attending to CME activities			Total	P-Value
			Regular	Irregular	Never		
Is CME activity setting in curriculum of your department	Yes	Count	35	69	0	104	.000
		% of Total	33.6%	66.4%	.0%	100%	
	No	Count	11	73	0	84	
		% of Total	13.1%	86.9%	.0%	100%	
	Not answered	Count	1	2	0	3	
		% of Total	33.3%	66.7%	.0%	100%	
	never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

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Table-17-

Attendance to CME activities & Is there assessment or evaluation in mid or end of the activities

			Attendance to CME			Total	P-Value
			regular	Irregular	Never		
Is there assessment or evaluation in mid or end of the activity	Yes	Count	27	51	0	78	.000
		% of Total	34.6%	65.4%	.0%	100%	
	No	Count	20	92	0	112	
		% of Total	17.8%	82.2%	.0%	100%	
	Not answered	Count	0	1	0	1	
		% of Total	.0%	100%	.0%	100%	
	never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-18-

Attending to CME activities & Is CME activity fixed or relevant policy

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
Is CME activity fixed or relevant policy	Fixed	Count	17	26	0	43	.000
		% of Total	39.5%	60.5%	.0%	100%	
	Relevant	Count	19	89	0	108	
		% of Total	17.6%	82.4%	.0%	100%	
	Not answered	Count	11	29	0	40	
		% of Total	27.5%	172.5%	.0%	100%	
	never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-19-

Attending to CME activities & Is there budget in the unitin which you operate?

			Attending to CME activities			Total	P-Value
			Regular	Irregular	Never		
Is there budget in the unitin which you operate	Yes	Count	13	25	0	38	.000
		% of Total	34.2%	65.8%	.0%	100%	
	No	Count	33	113	0	146	
		% of Total	22.6%	77.4%	.0%	100%	
	Not answered	Count	1	6	0	7	
		% of Total	14.3%	85.7%	.0%	100%	
	never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-20-

Attending to CME activities & Did you use portfolio to collect information & reflection

			Attending to CME activities			Total	P-Value
			Regular	Irregular	Never		
Did you use portfolio to collect information & reflection	Yes	Count	6	10	0	16	.000
		% of Total	37.5%	62.5%	.0%	100%	
	No	Count	41	131	0	172	
		% of Total	23.8%	76.2%	.0%	100%	
	Not answered	Count	0	3	0	3	
		% of Total	.0%	100%	.0%	100%	
	never attend	Count	0	0	12	12	
		% of Total	.0%	.0%	100%	100%	

Table-21-

Attending to CME activities & Barriers

			Attendance to CME activities			Total	P-Value
			Regular	Irregular	Never		
Barriers to attend	Individual	Count	0	30	2	32	.000
		% of Total	.0%	93.7%	6.3%	100%	
	Organizational	Count	0	4	2	6	
		% of Total	.0%	66.7%	33.3%	100%	
	Structural	Count	0	20	1	21	
		% of Total	.0%	95.2%	4.8%	100%	
	Mixing(all of the above)	Count	0	80	7	87`	
		% of Total	.0%	92%	8%	100%	
	Not answered	Count	1	10	0	11	
		% of Total	9.1%	90.9%	.0%	100%	
	No barriers	Count	46	0	0	46	
		% of Total	100%	.0%	.0%	100%	

- Individual Barriers = lack of time
- Organizational Barriers= Managerial Problems
- Structural Barriers= unsuitable place & time, lack of incentives, lack of feedback & reevaluation, not affecting my practice, un appropriate methods of CME.

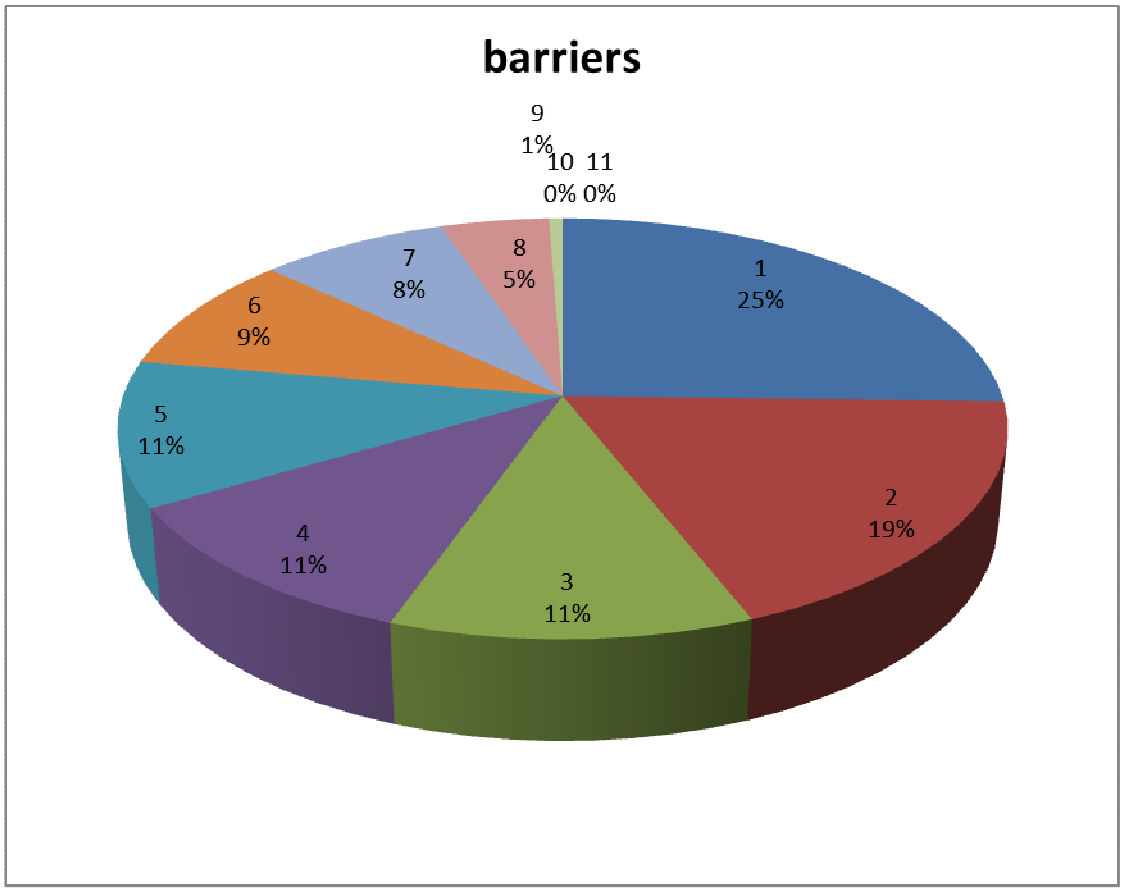

Figure-2- illustrate distribution of barriers factors;

- Lack of time=25%
- unsuitable place & time= 19%
- managerial problems=11%
- not affecting my practice= 11%
- no barriers=11%
- lack of feedback & reevaluation=9%
- un appropriate method of teaching= 8%
- Lack of incentives(food, certificate, location)=5%
- Not answered = 1%

Table-22-

Attending to CME activities & Suggestions to increase attendance

			Attending to CME activities			Total	P-Value
			Regular	Irregular	Never		
Suggestions to increase attendance	provide system check up to get promotion & up grading	Count	4	14	4	22	.031
		% of Total	18.1%	63.6%	18.3%	100%	
	Make it more relevant to improve practice	Count	3	28	2	33	
		% of Total	9.1%	84.4%	6.5%	100%	
	Provide incentives (food,credentials)	Count	0	2	0	2	
		% of Total	.0%	100%	.0%	100%	
	provide online sessions to facilitate the communication	Count	3	10	2	15	
		% of Total	20%	66.6%	13.4%	100%	
	Mixing(all of the above)	Count	37	86	3	126	
		% of Total	29.3%	68.4%	2.3%	100%	
	Not answered	Count	0	4	1	5	
		% of Total	.0%	80%	20%	100%	

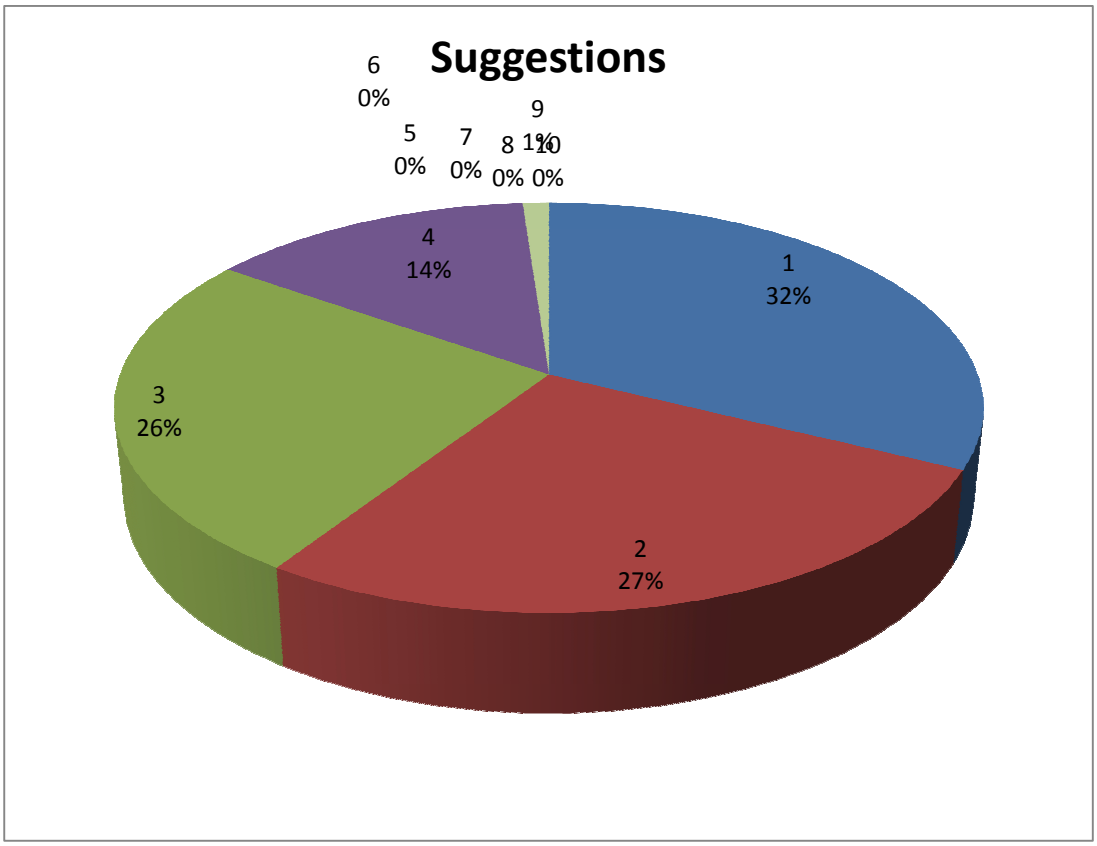

Figure-3- Illustrated distribution of suggestions to increase attendance to CME activities.

- Make it more relevant to improve practice = 32%
- Provide system check up to get promotion & up grading =27%
- provide on line sessions to facilitate the communication=26%
- provide incentives (food, credential)=14%
- not answered = 1%

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