

# SWOT Analysis of Medical Education and Training in Government Medical College, Kerala, India

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**Abstract- OBJECTIVES** - To identify the strengths, weaknesses, opportunities and threats of Government Medical College, Thrissur, Kerala and to identify factors to enhance the proper utilization of opportunities.

**METHODOLOGY** – It is a cross sectional study done in Govt. Medical College, Thrissur. Twenty In-Depth Interviews were conducted with key informants for data collection. Purposive sampling was done. Data were collected using In-Depth Interview Guide, administrative & teaching reports, registers from hospitals and registers of students for results and analyzed both quantitatively and qualitatively.

**RESULT** – Strengths found out were Adequate Teaching and Non-teaching staff as per Medical Council of India standards, Adequate Clinical Material, good quality UG & PG teaching, Excellent results, Better Patient Care Services, Excellent Operation Theatre Complex and Well Equipped Laboratories. Weaknesses identified were Lack of Academic Block and Inadequate Lecture Halls. The Opportunities are Functional Autonomy, Expand institution with more Specialties & Super-specialties, Enhancement of PG seats, Attract more funds and grants for Research and further development. The emerged Threats are Budget Allocation inadequacy, Beaurocracy and Water Scarcity during summer season.

**CONCLUSION** - This SWOT Analysis was a Situation Analysis of our institution. The required facilities are compared with the norms and requirements of Medical Council of India considering it as the Gold standard.

**Index Terms**- Medical Education, Action Research, Key Informants, Situation Analysis

## I. INTRODUCTION

Medical Education is a dynamic and complex process. Individuals who receive their education from the best institutions are assumed to be more knowledgeable and to have higher intellectual potential to learn and accumulate firm-specific knowledge (Hitt,M.A., Bierman,L., Shimizu,K. & Kochhar,R., 2001). Action research is a frame work for diagnosing, implementing and evaluating a change process (Weihrich, H, 1982).

SWOT is analysis of strengths, weaknesses, opportunities and threats of an educational process or activities of an institution or medical education as a whole of a state or a nation. It is an action research where in we would like to improve the service provision and practice of the medical education system rather than to produce knowledge. It reveals development opportunities

as well as vulnerabilities to internal organizational and external environmental changes. The severe shortage of basic science teachers reported by a SWOT analysis done in Nepal in 2008 is a new attempt in this regard. The researchers came up with the conclusion of many shortages and short comings in all areas except ophthalmology where the services provided were reported as exemplary (Dixit H, Marahatta SB, 2008). Professionals devote a lot of time to deliver high quality service. The absence of useful project management methods increases the professional's work hours and reduces their job satisfaction (Wei-Ming Ou; Kang-Wei, 2007). Among the many fads and fashions in strategic management, SWOT analysis has enjoyed consistent popularity (Novicevic,M.M., Harvey, M., Autry,C.W., & Bond, E.U., 2004). SWOT is designed for the preliminary stages of decision-making and as a precursor to strategic planning in various kinds of applications (Skeese,M.E., 2002) Large numbers of academics have also applied SWOT to open new avenues for strategic research (Valentin,E.K.,2001 and Nair,K.G.K., & Prasad.P.N, 2004). Threats are conditions outside the organization's direct control and endanger the integrity and profitability of the organization (Hill. C.W.L. and Jones, 2004). SWOT Analysis of Indian Pharmacological Society done by B.N.Dhawan is a credible study in this regard (B.N.Dhawan, 2011).

Even after an extensive literature search, I failed in finding a publication of SWOT analysis from any of the Medical Colleges in Kerala and India. So it will be an innovative project in this aspect, as we could fill the existing research gap. Not only that, this action research has recently been recognized by Medical Council of India as a topic in Institutional Goals of Medical Graduate Training program by its Amendment Notification. SWOT will help in Educational Situational analysis and identification of each of them in our Institution, as is the need of both Government and public.

Government Medical College Thrissur, established in 1982 is presently one of the leading centers in medical education in Kerala. The college was granted permanent recognition by Indian Medical Council in 1991 and by World Health Organization in 1993. PG courses were started in 1997. We did the SWOT Analysis of our Institution and tried to compare the findings with MCI recommended standards. The purpose was to do an Academic Monitoring in order to find out the resources, output and subtle changes.

## II. METHODOLOGY

### OBJECTIVES

1. To identify the strengths, weaknesses, opportunities and threats of Government Medical College, Thrissur, Kerala.
2. To find out factors to enhance the proper utilization of opportunities.

### STUDY DESIGN – Cross Sectional Study

**STUDY SETTING** – Government Medical College, Thrissur, Kerala

**STUDY PERIOD** – 2011 to 2012

**SAMPLE & SAMPLING** – Purposive Sampling was done as we needed key informants to generate maximum possible information. The Head of institution, Superintendent, Heads of various departments and non-teaching staff who had more than 2 years experience in the institution were selected. Similar criterion was applied in the selection of various students too. Patients were recruited randomly.

### METHODS

Key informants were interviewed. We have conducted twenty In-Depth Interviews. The key informants included Principal(1), Superintendent(1), Heads of Departments of Pre-Clinical(2), Para-clinical(2) and Clinical(2) specialties, Administrative staff(2), non-teaching staff(1), para-medical staff(1), in-patients(2), undergraduate(2), postgraduate(2) and paramedical students(1) and a local political leader(1). After taking prior appointment all were interviewed in neutral places

without distractions. All respondents gave their consent to participate in the study. The interviews took forty five minutes to one hour. The whole interviews were voice recorded using a MP3 audio recorder.

**DATA COLLECTION TOOL** – In-Depth Interview Guide with open-ended questions. Documents of accountability from administrative office regarding administrative & teaching reports, registers from hospitals and Registers of Students for results were analyzed.

**DATA ANALYSIS** – Free listing, domain identification, coding and summarization of the data were done from the transcribed verbatim data of In-Depth Interviews. The bed strengths in hospitals, the availability of faculty and the results of various courses were analyzed quantitatively.

**ETHICAL CONSIDERATIONS** - Ethical clearance was obtained from the Institutional Ethical Committee for Human Research in Government Medical College, Thrissur. Informed written consent was obtained from the participants of the study. The autonomy of the participant was given prime importance. Confidentiality of the data was assured to the participant when consent was taken. Institutional Review Board approval was sanctioned in March 2011.

## III. RESULTS

The qualitatively analyzed data is summarized in table 1 as Strengths and Weaknesses and in table 2 as Opportunities and Threats.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Hospital buildings infrastructure is made adequate by constructing additional buildings and is in the process of commissioning</li> <li>• Adequate number of Teaching &amp; Non-Teaching Staff as per MCI norms</li> <li>• Clinical materials are adequate</li> <li>• Good quality UG &amp; PG teaching</li> <li>• Educational outcome is exceptionally good</li> <li>• Better Patient care services</li> <li>• Proper Curriculum implementation</li> <li>• Well established research culture with adequate number of highly qualified Faculty</li> <li>• Academic program monitoring</li> <li>• Conduct semester wise meeting of students, parents and teachers</li> <li>• Well equipped and effectively functioning Operation theatre complex</li> <li>• Alumni Association donated A/C Auditorium with 1000 person capacity and 2 A/C halls wit 200 capacity each</li> <li>• Availability of needed software and learning management systems for faculty and students</li> <li>• Research output is in growing phase with adequate SBMR funds</li> <li>• Total PG seats enhanced to 105 in 20 departments in 2012 &amp; Started Mch Neurosurgery with 1 seat</li> <li>• Reasonably equipped Laboratories</li> </ul>	<ul style="list-style-type: none"> <li>• Academic complex with all pre-clinical and para-clinical departments cum administrative office is lacking as all are existing in separate old buildings</li> <li>• Lecture theatres are inadequate as per MCI norms – instead of 4 gallery type halls with capacity 180, 3 halls with 150 capacity is available.</li> <li>• The two hospitals (Medical &amp; Surgical) are separated by a distance of half a kilometer and two separate casualties are being maintained one for medical specialties and one for surgical specialties. Both are inadequate in hi-tech equipments as per norms of MCI. Central oxygen available is limited.</li> <li>• Casualty services are insufficient in infrastructure, equipments &amp; manpower</li> <li>• Separate injection rooms &amp; dressing rooms for male and female not available.</li> <li>• Common Rooms for boy and girls are inadequate</li> </ul>

<ul style="list-style-type: none"> <li>Affordable fees structure &amp; highly paid faculty</li> <li>Beautifully maintained Green Campus with Healing Garden containing many Ayurvedic medicinal plants</li> <li>Enough land for further development</li> </ul>	<ul style="list-style-type: none"> <li>Residence Quarters for PG's and staff inadequate</li> <li>Medical education Unit &amp; Telemedicine facilities are inadequate</li> <li>Standard treatment protocols are not implemented</li> <li>Forensic Medicine Department issues has damaged the reputation of Institution</li> <li>Lack Mission Statement</li> </ul>
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**Table 1 showing Strengths and Weaknesses**

OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>Functional Autonomy</li> <li>Enhance PG and UG seats</li> <li>Start Dental and Pharmacy Colleges</li> <li>Expand with more Super-specialties &amp; Trauma Care Unit</li> <li>Creation of more Medical &amp; Para-medical posts to meet patient overload (including Casualty Medical Officer &amp; Bio-Medical Engineer)</li> <li>Educational Exchanges for transfer of educational credits</li> <li>Electronic Medical Record System</li> <li>Timely recruitment by PSC to fill up vacancies promptly</li> <li>Referral System Implementation – Center of Excellence</li> <li>Governmental Social Security Schemes &amp; Health Insurance Packages</li> </ul>	<ul style="list-style-type: none"> <li>Budget Allocation Inadequacy</li> <li>Beaurocracy</li> <li>Water scarcity - The campus at present needs 15 lakhs liters of water per day for running of hospitals, hoslels, departments and green campus (total 173 Acres). Kerala Water Authority supply is 4 to 5 lakhs liters per day. There are 7 bore wells and a pond which dries up during summer.</li> <li>Escalating cost of Health Care</li> </ul>

**Table 2 showing Opportunities and Threats**

The quantitatively analyzed data are shown in tables 3,4 and 5. Table 3 describes the summary of bed strength (clinical material) of Clinical Departments Medicine, Surgery and Allied specialties and Obstetrics and Gynecology in both hospitals of our Institution. Present bed strengths are compared with MCI requirements and were found to be highly adequate. The Faculty position of our Institution in 2011 is being compared with the MCI requirements in table 4. The cadre wise availability of faculty meets the MCI requirements satisfactorily. Table 5 summarizes the educational outcome of our Institution during the study period. Except for the Certified Radiology Assistant's (CRA) Course (50%), the results are exemplary. 90% pass in Post Graduate Courses, 99% MBBS, 98% BSc Nursing, 89% Diploma in Medical Laboratory Technology, 94% Diploma in Ophthalmic Assistant's Course and 100% pass for Diploma in Operation Theatre Technology Course. The teaching reports analyzed showed adequate coverage of curricula in all courses which ensured the quality of implementation. The factors derived after interviewing the key informants are listed below. If we could accomplish these, it will enhance the opportunities and help our Institution to reach the level of Centre of Excellence.

**Factors to enhance opportunities**

- Provide more Quality care services
- Promote Horizontal & Vertical Integration
- Multidisciplinary approach in research
- Seek and take advantage of external resources - grants & funding – for development of Institution
- Teacher & Student feedbacks for Quality Assurance
- Recognize & Reward staff & students for their achievements
- Expand activities of Telemedicine Department
- Faculty Development Programs & Capacity Building for all categories of staff

**Limitation of study**

- We could perform In-Depth Interview of 20 Key Informants only. Interviewing more informants might have improved the findings. We did not use Focus Group Discussion method.

**Strengths of study**

- Anticipated limitation of non co-operation from administrators was not encountered
- State Board of Medical Research Grant was allocated for the project
- We used Medical Council of India regulations as Gold Standard to analyze the facilities

#### IV. CONCLUSIONS

This SWOT Analysis was a Situation Analysis of our institution. The required facilities are compared with the norms and requirements of Medical Council of India considering it as the Gold standard. Even though it is a low resource Medical College in rural setting, the stakeholders maintain expected quality with scope for improvement. As implications are better teaching and translation of research into clinical practice, we need to monitor on a Continuous Basis to reassess the performance.

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Tables 3-5

Specialty	MCI Required beds/units	Present beds/units
<b>Medicine &amp; Allied</b>		
General Medicine	150/6	200/6
Pediatrics	90/3	100/3
TB & Chest	30/1	40/1
Skin & VD	15/1	40/1
Psychiatry	15/1	40/1
<b>Total</b>	<b>300</b>	<b>420/12</b>
<b>Surgery &amp; allied</b>		
General Surgery	150/6	190/6
Orthopedics	90/3	100/3
Ophthalmology	30/1	40/1
ENT	30/1	40/1
<b>Total</b>	<b>300</b>	<b>370/11</b>
<b>Obstetrics &amp; Gynecology</b>		
Obstetrics & ANC	60/2	70/2
Gynecology	40/1	30/1
<b>Total</b>	<b>100</b>	<b>100/2</b>
<b>Grand Total</b>	<b>700/26</b>	<b>890/26</b>

**Table 3 showing the requirements of bed strength per unit as per MCI & availability in this institution in 2011**

Courses	Intake capacity	No. of students admitted	Pass % in 2011
PG Courses	105	93	90
UG Courses			
MBBS	150	150	93
Paramedical Courses			
1. BSc Nursing	60	60	98
	35	35	89
2. DMLT	35	27	50
	25	23	94
3. CRA	15	15	100
4. DOA			
5. DOTT			

**Table 4 shows details of Courses and outcomes in our college in 2011 (Mch Neurosurgery & MSc Nursing courses only started & exams not conducted)**

Research	2009-10	2010-11	2011-12
Projects – non funded	15	16	11
Projects - funded	40	25	40
Publications	25	20	40

**Table 5 showing Research Outcome of the Institution**