

# HEADING TOWARDS INNOVATION AND TRANSLATING EVIDENCE INTO CARE OF HEALTH; A PROJECT AT HITEC INSTITUTE OF MEDICAL SCIENCES (HITEC-IMS)

Maj Gen (R) Prof. Dr. Hamid Shafiq, HI(M)

Department of Medicine, HITEC-IMS, Taxila, Pakistan

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## ABSTRACT

Pakistani medical colleges tend to produce medical practitioners rather than medical researchers who are life-long learners. Nonetheless, without research, the practice remains outdated. Medical institutions should focus on shifting this trend and align with global innovation trends. HITEC is one such institute playing a role in developing research culture and setting an example for other institutes in this low resource country.

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## INTRODUCTION

Research trend is rising globally, with China and the United States taking the lead. Research output is correlated with a nation's culture, which can be assessed on the Hofstede scale. This scale measures culture as a subject of programming of the human mind in six dimensions. Variables on this scale have been studied to be related with research, where research promoting variables include individualism and indulgence in desires. At the same time, uncertainty avoidance and power distance are negatively correlated with research<sup>1</sup>. Hofstede scoring of national culture for Pakistan reveals a low score on individualism (14 out of 100), and indulgence (0 out of 100) and high on uncertainty avoidance (70 out of 100), thus reflecting a less favorable mindset for research in nation<sup>2</sup>. On the contrary, a report by Web of Science data analytics in 2018 discovered Pakistan to have the most extensive global gain of 21% in research output in one year. The author assumed that this gain could be due to political policies on science, democracy, and international collaboration for funds<sup>3</sup>. This could mean that the right policies and facilitation for researchers can go a long way in taking us ahead, and such initiatives should be institutionalized.

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Correspondence to: Maj Gen (R) Prof. Dr. Hamid Shafiq, HI(M),  
Principal HITEC-IMS Taxila.

Email: hamidshafiq.amc@gmail.com

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## HITEC IMS RESEARCH PROJECT

In order to provide an environment within an institute that facilitates research, research programs should be designed wisely. One such program was started in HITEC medical college by the Head of the institute in July 2021 to promote research culture among faculty and students to fulfill the research needs

of faculty, institute and the local community. This initiative started as a pilot project, with careful planning based on theories of a change process, human behavior, and best practices in management. It was realized that the cultural context was unfavorable and more facilitation was required for research culture to prevail. It started with feasibility analysis, and given the shortage of resources, it was decided to include as input whatever resources are available, using human resources strengths of the institute by matching skills with tasks and covering gaps with time. Staff was designated by

sparing from other departments, and within two months, a fully equipped research cell got established. For providing a conducive environment, a flexible structure was chosen that reflected the organic model of organization<sup>4</sup>. Research cell was divided into different units of publication, research and development, and research review, and power dynamics were handled carefully.

The goal of the research culture project was to develop culture by research mentorship to make all departments self-sufficient in research skills and reach the stage of self-reliance, where contribution to evidence generation and use becomes a routine behavior for faculty and they no longer need any research program. A representative from each department was selected to form a multidisciplinary research team. Meetings for

### CAPSULE SUMMARY

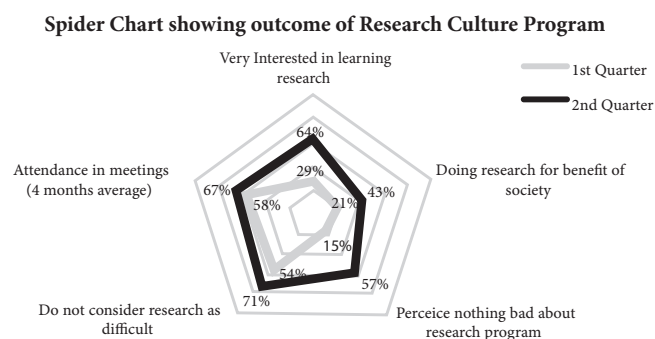
In order to provide a zealous research environment within an institute, research projects should be designed judiciously and with time line. To promote this concept, a project, supported by the major stakeholders, was carried out at HITEC-IMS Taxila, Pakistan. A positive shift in organizational behavior towards research was witnessed within a short span of time.

collaboration and motivation were started. Training of team was the first step in developing a culture to address research illiteracy, which is the most common reason for lagging<sup>5</sup>. Learning by doing was practiced by assigning a project to each department to follow the practices being taught.

## RESPONSE BY THE FACULTY

This initiative was positively taken by the majority of the team members. One reason may be that it fulfilled the need of faculty for professional growth, and other may be that it was promoted by the Head of the institute and higher authorities. However, later on, with some difficulties arising in study approvals and time constraints, there was a temporary decline in attendance, motivation, and interest of the team, which settled by involving seniors in encouragement and help of researchers. Although many focal persons did not perceive research as easy, but they managed their time with academic duties and, by the end of

research society. All interested students were allowed to become a part of society as secretaries. Around 30 secretaries were working under the leadership of one student President in different wings, including the Management wing, Research wing, Communication wing, and Media wing. All were assigned clearly defined roles and provided a flexible and friendly environment to work as a strong network. They were motivated in meetings by showing them a purpose in research work of benefiting society. They were trained by workshops and prepared to align research with studies and work where an unanswered question should become the trigger for research<sup>6</sup>. Soon many medical students started their research projects, and a survey showed an increase in students' interest in research. Unlike faculty, students perceived research as easy. Students' society got significant research needs of students fulfilled by research cell and successfully established research culture among students within a short time. By the end of three months of forming society, the list of research projects rose from 18 to 29, an addition of 12 by students. This achievement was cherished by all and convinced seniors that young minds have a lot to offer when it comes to innovation and research if their input is given due recognition, with accessible communication, and when their needs are expressed and fulfilled<sup>7</sup>.



**Figure 1: Comparison of 2 Quarters; Data from Focal Persons Feedback of Research Culture Program (where feedback form was filled by 13-14 persons each time) and Research Cell Record**

the 2nd quarter, 18 research projects had been started by 17 departments. A survey was done before the start of project and after every quarter. It showed that interest in learning research improved with time especially in clinicians. One highly encouraging finding was the change in interests, with more researchers getting involved in research for the benefits of society and less for their interests or promotions. Average number of Journal clubs done per month rose from 12 in 1st quarter to 16 in 2nd quarter. Quality of synopsis also improved in 2nd quarter with majority synopsis getting approved without changes in single IRB meeting. A comparison of two quarters is shown in Figure 1.

## RESPONSE BY THE STUDENTS

Besides faculty, the response of students to this program was remarkable. The research cell had planned activities for students in the 2nd quarter. Nevertheless, having heard about the level of support to researchers, they started showing up in the very 1st quarter in the research cell and participated in research competitions independently. During the 2nd quarter, the research cell took the initiative of forming students'

## CONCLUSION

This program was considered a success, although it was anticipated at the start that bringing change won't be possible. Usually, only 30% of change programs are successful and require a shift in organizational behavior well adapted to change<sup>8</sup>. This project was also well designed with a shift in organizational behavior and was well supported by the majority stakeholders and with the hard work of research team soon encouraging results started showing to the point where this program started getting appreciated outside institute also. Some visitors showed interest in joining research activities at HITEC. Collaboration with other colleges started within the first quarter and internationally within the second quarter. An end-user unit was added that would work on "Translating Evidence into Care of health." It will monitor the use of research findings generated in the institute. It will also suggest research topics that are more beneficial and usable, based on the research needs of the institute and the local community.

## CHALLENGES

There were some challenges in sustaining the program. As the culture improved, the research staff got overwhelmed with much work to maintain the culture. There were no incentives for retaining them in this additional duty. The budget was not designated for research cell because that was not a requirement for licensing of the institute. Pakistan Medical Commission, our regulatory authority, places no staff requirement for research departments in its licensing standards. A report by Ministry of health in 2010 mentions that in Pakistan most universities do not take research as a priority and therefore do not dedicate faculty positions, budgets, or infrastructure for research<sup>5</sup>. This is quite critical for institutes that recognize research as a pathway

to recognition among medical community. When already dealing with a challenging context of national culture with high uncertainty avoidance, any further decisive negative factor can markedly sway research culture in our country, no wonder we have a culture of importing guidelines and not relying on generating our own. A dearth of research culture was highly felt during the recent pandemic, where medical universities contributed even lesser than nonmedical ones and this lack of research capacity has raised many questions on the quality of doctors produced in the country. with high uncertainty avoidance, any further decisive negative factor can markedly sway research culture in our country, no wonder we have a culture of importing guidelines and not relying on generating our own. A dearth of research culture was highly felt during the recent pandemic, where medical universities contributed even lesser than nonmedical ones and this lack of research capacity has raised many questions on the quality of doctors produced in the country.

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