

A snapshot of current medical research: The notion of supply and demand.

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Abstract

Research has never been more in demand and pursued by various health disciplines worldwide as it is at present. Contemplating the amount, type and quality of current medical research over the last decade leads one to consider the driving forces behind such research. The primary goals of many researchers are to improve the quality of healthcare services, provide evidence to guide practice, provide better treatment regimens for some diseases, decrease the burden caused by chronic diseases, fight incurable diseases, and contain any potential emerging pathogens. The fever for publication has led to a number of predatory journals on the Internet that accepts papers for the sake of making money, regardless of their quality and originality. Therefore, it is time to be more selective and innovative with our research in order to have a significant positive impact on healthcare services.

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Dear Editor,

Research has never been more in demand and pursued by various health disciplines worldwide as it is at present. This is not surprising given the fact that medical research has been the most important and fundamental activity throughout history that has allowed researchers and scientists to make advances and understand the complexity of diseases, how the human body works, how people become sick, and identify risks factors that should be avoided in order to remain healthy. Thus, the quality healthcare services that we enjoy today are based on the outcome of research produced by the collective efforts of researchers who have dedicated their lives to science. These endless research activities have helped to cure incurable diseases, improve people's quality of life, and even extend their lives.

Contemplating the amount, type, and quality of current medical research over the last decade leads one to consider the driving forces behind such research. The primary goals of many researchers are to improve the quality of healthcare services, provide evidence to guide practice, provide better treatment regimens for some diseases, decrease the burden caused by chronic diseases, fight incurable diseases, and contain any potential emerging pathogens. For example, the outbreak of Middle Eastern Respiratory Syndrome (MERS-CoV) in Saudi Arabia, Ebola virus, Swine flu, and many other epidemics have

initiated research and time-sensitive investigations around the world to cure these viruses and make new discoveries that will prevent their spread. Moreover, chronic diseases, such as diabetes, cancer, hypertension and cardiovascular diseases, have triggered researchers to clearly define their contributing factors and share this knowledge with the public so that they can decrease the risks of developing these diseases. Pharmaceutical companies have been investing billions of dollars in attempts to discover safer, more effective and more profitable drugs through phases of bench experiments, generating compounds and subsequent clinical trials [1]. Patients' compliance and adherence with therapeutic regulations, awareness and attitude, satisfaction, and other aspects related to the social sciences have also been regularly assessed using different research methodologies [2].

In addition to the more selfless reasons that drive medical research, such as generating knowledge for the betterment of humanity, there are many more factors fueling medical research, including, but not limited to, making money for pharmaceutical companies, faculty and researchers who want to make discoveries that will improve their chances of promotion and students who wish to complete academic degree requirements. Regardless of these different motivations for conducting medical research, many of those who have undertaken it have contributed to building a research culture. However, some of these

purposes might have negatively influenced the quality of the research produced. They might also have led to areas being over-researched and published in many journals. The fever for publication has led to a number of predatory journals on the Internet that accepts papers for the sake of making money, regardless of their quality and originality. Therefore, it is time to be more selective and innovative with our research in order to have a significant positive impact on healthcare services.

We have borrowed the term “supply and demand” from economists who use it to understand the determination of the prices of goods in the market [3]. Changing either supply or demand will influence the market price. The same logic can be applied in the field of medical research. For example, researchers and scientists are frequently posing hypotheses about complex issues within their field in order to understand why they are happening, to improve current practice, or discover better treatments. Thus, in this case, the demand is the persistent complex issues in the field, which have not been adequately investigated by researchers. In other words, it is the gap in the literature that ought to be addressed. While the supply, in this scenario, is the research outcome that offers new knowledge. Unfortunately, the demand for specific medical research is mainly driven by illness and the emergence of new infectious diseases. For instance, diabetic patients with a poor prognosis would alert any physician to question their compliance or adherence to the prescribed medical regimens. If the supply of research on a specific medical issue greatly outweighs the demand, it means there is a redundancy and useless research papers have been published when the need lies elsewhere. Over-researching a topic is a waste of time and a drain on resources, including financial resources.

Researchers from various specialties will always be in search of revolutionary knowledge, wanting to hit the center of the demand board with the supply dart. However, this is easier said than done, as research centers all over the world provide research grants for studies that may hit far beyond this demand point. Every year, scientists, health practitioners, medical students, and other professionals

propose diverse research ideas that may or may not fill the gaps in the literature. It is the key responsibility of senior researchers, students’ research mentors and universities’ scientific committees to guide novice researchers and students in the selection of innovative research ideas that will make a difference in the field. Researchers should always build on previous studies’ findings and recommendations. In addition, research proposals should be formulated based on the need of the community to better understand, improve and promote its own health.

Research centers should assume their responsibilities of generating quality medical research by acting in an advisory role to ensure the research proposals of scientists, researchers, students and healthcare practitioners are novel, original, practical, and significant to the body of knowledge to which they intend to contribute. They should also advise prospective researchers to focus, sharpen, and orient their ideas to meet the demands of the community. Another way to improve the quality of medical research is by disseminating research findings or even presenting a work in progress at national and international conferences and scientific meetings, which would allow experts to comment and provide constructive feedback. High quality journals have also elevated the standards for accepting studies for publication to a degree that a number of researchers have often failed to publish their completed studies. Quality research will help us build a sustainable knowledge-based economy. Every researcher and organization must assume this responsibility.

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