



The most critical trait of great researcher

Yong-Geun Choi, DDS, MPH

Section Editor of JKAOMS

Epidemiology & Biostatistics, Graduate School of Clinical Dentistry, Korea University, Seoul, Korea

What do you do research for? For reputation, pleasure of accomplishment, documentation of novel discovery, or promotion, to name but a few. The motives may vary, but there is an invariant goal of research; pattern detection.

Pattern must be identified through either observation or experiment. Replication of abnormal distribution of a specific event or new relationship between two events is worthy pattern of research. Observation or experiment on enough size of sample population is needed to detect a pattern which is repetition of phenomenon, in other words. Tools and skills for precise and accurate measurement of distribution or association are required. Sophisticated statistical analysis method for differing random pattern from signal one hidden in data set should be prepared.

Research should be planned with a clear view of limits or errors in measurement and sampling, because a pattern may be found by errors. As Chamberlin¹ in 1890 who wrote a landmark paper on the scientific method advocated the method of multiple working hypothesis as scientific measure to detect real facts by overcoming parental affection of researcher's hypothesis which may cause to overlook the force of errors and limits^{1,2}. Ability to imagine and ruminate all relevant forces to pattern formation is the most important trait of great investigators.

Interest in all sorts of different disciplines rather than single specialized one is a road to develop the trait. It consumes a lot of physical and mental energy, and that's why it is not easy to be versatile. Once determined to go for it, reading

literature of diverse disciplines everyday is recommended. It obviously takes a long time to hone the great trait. Then one day, a discovery of new pattern accidentally comes, as Szent-Györgyi³ who first isolated vitamin C and received a Nobel Prize wrote in 1972.

Unfortunately, we, clinician researchers, are not at ideal situation. It is hard to spare time from busy clinical and didactic schedule to indulge in diverse discipline's literature which are published like tsunami, since we are already overwhelmed with our own discipline's ones. Reduction of activities irrelevant to patient care and research may risk distancing ourselves from society. Life keeps us making hard choice. Fortunately, reminding the motive to do research may give us a help to bolster what we are willing to sacrifice; what do you do research for?

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

References

1. Chamberlin TC. The method of multiple working hypotheses. *Science* 1890;15:92-6.
2. Elliott LP, Brook BW. Revisiting Chamberlin: multiple working hypotheses for the 21st century. *Bioscience* 2007;57:608-14. <https://doi.org/10.1641/B570708>
3. Szent-Györgyi A. Dionysians and apollonians. *Science* 1972; 176:966. <https://doi.org/10.1126/science.176.4038.966>

Yong-Geun Choi

Epidemiology & Biostatistics, Graduate School of Clinical Dentistry, Korea University, 73 Goryeodae-ro, Seongbuk-gu, Seoul 02841, Korea

TEL: +82-2-3394-7555 FAX: +82-2-3394-6875

E-mail: ebdent@snu.ac.kr

ORCID: <https://orcid.org/0000-0003-1430-8228>

© This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Copyright © 2020 The Korean Association of Oral and Maxillofacial Surgeons. All rights reserved.

How to cite this article: Choi YG. The most critical trait of great researcher. *J Korean Assoc Oral Maxillofac Surg* 2020;46:219. <https://doi.org/10.5125/jkaoms.2020.46.4.219>