

Knowledge, fear of the unknown, opinion, and the pandemic

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The human brain is a phenomenal storyteller. Fueled with imagination, it specializes in fiction, often creating a backdrop to a story that resembles a familiar place but allowing the characters and plot to evolve in the eye of the beholder. However, in dire situations there is a biological and psychological search for truth.^{1,2} Unfortunately, the brain's pursuit of truth often prefers to take the shortest and quickest path possible as it scrambles to put the pieces of a mental puzzle together. It is a survival mechanism sustained through human evolution.² Herein lies the rub: humanity's demand for answers yet reluctance to investigate the credibility of the outcome.

Throughout my years of teaching and practicing as a clinical pharmacist, it has been my personal observation that there are 3 elements involved in each decision or thought process: knowledge, intuition, and fear of the unknown. Ideally, each element would contribute equally to decision making or a search for an answer. The knowledge that one obtains would feed into the intuition that allows decisions to be made without conscious reasoning while the fear of the unknown served as a check and balance to the other two. Maintaining this equal balance,

however, requires effort, self-discipline, and most importantly, an intellectual curiosity. Healthcare providers are taught the scientific method, and this process is innate to our approach to problem solving. But what happens when the elements fall out of equipoise?

This past year demonstrated humanity's desire and thirst for knowledge. As healthcare providers tried daily to gain knowledge on an evolving pathogen, they were routinely met with the general public's requests for answers that often did not yet exist. As everyone searched for answers amidst a global pandemic, we encountered a fork in the road in our pursuit of information. One path led to confidence in newly gained knowledge, while the other led to conviction in belief. Confidence, unlike conviction (which holds its foundation in a deep-seated belief or persuasion of thought), contains humility and the acceptance of being proved wrong. From my observation, the catalyst that helped to create this division also served as the wedge in the fork of the road: fear of the unknown.

It is important to understand the context of fear of the unknown and the pursuit of knowledge. Fear of the unknown is a valid response to a situation that one has limited or minimal understanding of—essentially, a lack of knowledge. Research has shown it has a biological basis and is a psychological component of how we approach unfamiliarity.³ The important factor is whether the fear motivates or paralyzes your efforts to learn. Astronaut Chris Hadfield, who served as commander of the International Space Station and launched multiple times from Earth, said the best antidote for fear is competence.⁴ Using fear of the unknown as a motivator to gain knowledge will lead to a parallel increase in intuition. On the other hand, allowing fear of the

unknown to proliferate unchecked will impair your ability to learn and ultimately blunt your intuition.

We are certainly living in strange times. It is rare to see the entire planet succumb to a common threat. Unlike technology, which grows over time, ideologies that slowly spread, or generational differences that take decades to establish themselves, our current pandemic efficiently took over the globe while affecting every aspect of life. Even with its nanoscopic size, the COVID-19 virus' impact was seen on a macroeconomic and multinational scale, affecting billions all within the course of a few months. How is it that a common threat to humanity has created such divide and fervent opinion in such a short period of time?

Just as the pursuit of knowledge assists with tempering the fear of the unknown, the information used to build that knowledge must now be interpreted with an additional layer of scrutiny. Unlike only a few decades ago, the limitless Internet that opens at the tap of a finger allows exponential amounts of information to be garnered—a stark comparison to the situation just a generation before us. Nevertheless, the immediate access to information and sense of immediacy in finding an answer have led to a decline in the effort to pursue truth versus information, whether it be false or not.⁵

As healthcare providers, we were placed in a precarious position with regard to individual and public health. For many years, doctors, nurses, and pharmacists have been viewed as the most trusted professionals due to their honesty and upholding of ethical standards.⁶ Yet, as inpatient admissions surged beyond capacity and questions became more numerous than answers, our trust and knowledge were tested daily as we struggled to stay abreast in a continually evolving predicament. Fear of the unknown became apparent

in discussions with those seeking advice.⁷ Despite our knowledge and expertise, we were bombarded by family, friends, patients, and strangers with a force that seemed to directly conflict with our data and recommendations: opinion.

Ubiquitous, opinions are often created from confusion, anxiety, uncertainty, and fear of the unknown. Mirroring the world's evolution as a result of technology and information, opinions can be created instantaneously, often without fact or reference. In the absence of confirmation or legitimacy, an opinion can quickly manifest itself as a false truth.⁸

Opinions fill a knowledge gap, and that can result in either creation of a perceived truth or pursuit of the actual truth. The urgency of discovering answers may unfortunately lead individuals to succumb to the former option, which is faster and easier but perilous (albeit comforting)—a potential falsehood perceived as fact. An individual's opinion, at times, transforms into an immovable force. Like a bad habit, an opinion injects itself into a conscience and eventually becomes a defensible way of life, despite consequence. This whole process, which was likely born of the pursuit of knowledge, soon became commandeered by fear of the unknown. Changing that opinion, just as with removing a bad habit, becomes a direct threat on an adapted way of life and a threat to one's knowledge and intuition.^{8,9}

Counseling patients has shown me a strange dichotomy: The less you know, the more confident you are in what you think you know. I believe the past year has changed that sentiment from confidence to conviction. The desire to believe what you prefer rather than what is true has proliferated in the setting of isolation and an evolving

pathogen. Whether this is driven by fear of the unknown or another factor, I have witnessed professional and personal relationships fracture over the issue of what one believes. I worry about the explosion of misinformed individuals who recklessly provide their opinions with carte blanche at the risk of harm to public health and increased skepticism in expertise. The net result of reluctance replacing resourcefulness and opinions affecting the pursuit of knowledge will have a long-lasting impact on our ability to mediate difficult conversations and situations. As with every inflection point, the most important question to ask is where do we go from here?

The pandemic has pushed many of us to our breaking points. It has mutated the way individuals gain knowledge and offer opinions, remodeled the delivery of healthcare, and stretched personnel gossamer thin. But we must not forget the sense of vulnerability that the pandemic created. Humans are hardwired to try to make sense of difficult and unfamiliar situations.² As our patients and the public have searched for answers to their questions, they have been met with a great sense of uncertainty. How can pharmacists and healthcare providers tackle the power of public opinion and assist in the gaining of knowledge for our patients?

In a constantly changing environment, pharmacists and providers should acknowledge the fears of our patients and listen to concerns while addressing opinions. Despite the uncertainty that the pandemic created, the public's trust in pharmacists, nurses, and physicians all increased in 2020 to their highest levels in two decades.⁶ Remaining honest in our discussions while maintaining our ethical standards will allow us to educate

and assist others in gaining knowledge as we help address their fear of the unknown.

Disclosures

Dr. Raub serves as an associate editor for *AJHP*. He is also employed by Seagen, and his views and opinions are entirely his own and do not necessarily reflect the views or opinions of Seagen or its employees. He has declared no other potential conflicts of interest.

References

1. Adolphs R. The biology of fear. *Curr Biol*. 2013;23:R79-R93.
2. Nicholson N. How hardwired is human behavior? *Harvard Business Review*. Published July 1998. Accessed May 20, 2021. <https://hbr.org/1998/07/how-hardwired-is-human-behavior>
3. Carleton R. Fear of the unknown: one fear to rule them all? *J Anxiety Disord*. 2016;41:5-21.
4. Powell CS. Why astronaut Chris Hadfield isn't afraid of death. NBC News. Published July 4, 2018. Accessed April 4, 2021. www.nbcnews.com/mach/science/why-astronaut-chris-hadfield-isn-t-afraid-death-ncna860511
5. Wang Y, Wu L, Luo L, et al. Short-term Internet search using makes people rely in search engines when facing unknown issues. *PLoS ONE*. 2017;12(4):e0176325. <https://doi.org/10.1371/journal.pone.0176325>
6. Saad L. U.S. ethics ratings rise for medical workers and teachers. Gallup. Published December 22, 2020. Accessed April 29, 2021. <https://news.gallup.com/poll/328136/ethics-ratings-rise-medical-workers-teachers.aspx>
7. Smith G, Blastland M, Munafo M. Covid-19's known unknowns. Editorial. *BMJ*. 2020;371:m3979.
8. Rosenberg SW. Opinion formation, theory of. In: Wright JD, ed. *International Encyclopedia of the Social and Behavioral Sciences*. Elsevier; 2015:243-245.
9. Deane C, Parker K, Gramlich J. A year of U.S. public opinion on the coronavirus pandemic. Pew Research Center. Published March 5, 2021. Accessed May 20, 2021. <https://www.pewresearch.org/2021/03/05/a-year-of-u-s-public-opinion-on-the-coronavirus-pandemic/>