

The Eight Stages of Trust and “Amanah” in Medicine and the Dunning-Kruger effect

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Abstract

The Dunning–Kruger effect is a cognitive bias in which unskilled people make poor decisions and reach erroneous conclusions, but their incompetence denies them the metacognitive ability to recognise their mistakes. These unskilled people therefore suffer from illusory superiority, rating their ability as above average, much higher than it actually is, while the highly skilled underrate their own abilities, suffering from illusory inferiority.

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The Eight Levels of Ignorance about Patient Trust or “Amanah”: Why Medics with Smart Phones may be Guilty of the Dunning-Kruger effect without realising it

Charles Darwin many years ago said wisely: “Ignorance more frequently begets confidence than does knowledge.” He would have not anticipated how a homo sapiens in the 21st and 22nd century might attain information and use it for the good or bad of mankind in this “new world”. One has a feeling of pseudo-security with the knowledge of Rhoton’s Neuroanatomy and the Functional Atlas of the cortex of the brain of Duffau with Nowinski’s Brain coordinates safely stored in a smart phone which at a moment’s notice could be used to show the young neurosurgical intern or a very experienced professor which functional neuroanatomy, neurophysiology, and cognitive neuroimaging could save the patient’s life.

Amanah is defined by Dewan Bahasa dan Pustaka (1) as fulfilling or upholding trusts and moral responsibility. Ignorance and trust to do the right thing with the correct learned, memorised and understood tasks as mentioned by Professor Emeritus Enkin MW, MD, FRCS(C) of the McMaster University Hamilton, Ontario, Canada (2) can be associated directly with the Dunning-Kruger effect (3–5) that states that in any given area of life, “under-skilled” and “undereducated people” suffer from an artificial arrogance borne of their ignorance of all they

cannot do or do not know. Because they are unaware of their shortcomings, they develop a cognitive bias, leading them to a belief in their own competence or even superiority where the opposite should exist. Thus, this cognitive bias leads to a pseudo-security feeling. Ignorance is truly bliss for that medical practitioner but absolutely dangerous to the patient! In contrast, those senior physicians and surgeons who are, in fact, “skilled and educated” often suffer from a feeling of inferiority (3–6). We assume that our abilities are merely average because our minds are focused on everything that we have left to learn. The more we know, the more we know how much we do not know. For this reason, I have lived my whole life with the 4W, 1H concept (what, where, why, when and how).

As Enkin MW (2), highlighted, sharing ignorance is much more difficult than sharing knowledge but is perhaps even more important. Our modern technology, especially mobile smart phones, that can recall instantly information from all over the world in any format and any language imaginable translated automatically makes it easy for medics not to learn and memorise information, which makes us “lazy”. We do not care to learn and memorise because we have tremendous amounts of information easily available.

As Enkin MW (2) stated, “We know what to do with; we don’t know what to believe; what to assimilate; what to ignore; how to interpret; and the information keeps pouring into the petabyte storage capabilities of the clouds system”. Thus,

I have modified my *amanah* to include 8 stages of ignorance and lack of trust (*amanah*) to improve medics' thinking (7).

First Stage: the age of naivety and lack of *amanah* (needs to be inculcated). You know you do not know. However, you are sure you can learn. With this method, you will carry out the *amanah* of learning, memorising and understanding (2).

Second Stage: The Facts. You know you still do not know. Facts are facts. The facts are not ignored because exam questions are there to test us. If we fail, we do not earn degrees. If we pass, we move forward. Having *amanah* means that we continuously learn, memorise and understand because we would forget what is learned over the next few weeks (2).

Third Stage: Naïveté. You know what to do. However, you do not know how to do it. Your *amanah* pushes you to relearn, rememorise, and reunderstand even with the help of the smart phone (2).

Fourth Stage: Frustration. You know you do not know. However, you know that others know. *Amanah* asks you to practice and teach skills to yourself and others so that you do not forget (2).

Fifth Stage: Expertise, the danger stage. You think that you know, and others think that you know. *Amanah* reminds our conscience to speak the truth to our patients and to know what we are doing prior to treatment and hazardous surgical procedures (2).

Sixth Stage: Pyrrhic success. You know that you do not know. However, others think that you know. Experienced senior specialists or Associate professors use only skills learned from experience and prior learned, memorised and understood concepts to treat disease processes. *Amanah* dictates that the patient trusts the physician or the surgeon to be 'skilled' in the procedure that he is performing (2).

Seventh Stage: Ignorance. You know that you do not know; others know that you do not know; and it doesn't matter. As the medical person becomes a senior consultant, the experiences he gained from different cases creates his methods and approaches to surgery and treatment. *Amanah* is unheeded and declines as experience puts the human brain at 'rest'. He or she thinks that he or she knows everything from experience. Therefore, relearning, memorising and reunderstanding patient anatomy, physiology and functional cognition is unimportant (2).

Eighth Stage: Loss of insight. The person concerned is the reference person or better known as the super consultant. Books, journals and evidence-based management is neglected,

and special cases that are difficult to manage are referred for "super" expert opinion. Death at the hands or mind of the surgeon or physician is accepted as the final choice. The patient and patient's family has complete trust in the surgeon or physician (a functional MRI shows that the trust area in the brain is in the angular gyrus (AG), anterior cingulate (AC), left frontal lobe (LF), right frontal lobe (RF), and putamen/caudate nucleus (PU/CA). It is so reliable that even the thought of the treating medic being ignorant by a patient is deemed impossible) (8).

There is so much knowledge out there, and we have to learn it. Trust must overcome



Figure 1: These people have constantly influenced my decisions and contributed to the way I learned and thereafter envisioned the eight stages of trust and *amanah* in medicine. From the top my mother, Norleni Mohd Salleh, my father Leftenan General (Retired) Dato' Abdullah Samsudin, my neurology, neurosurgery & neuroscience teachers: Professor Emeritus Dr Luc Calliauw, Professor Dr Jacques Caemaert, Professor Dr Jacques de Reuk from the University of Ghent, Belgium, and Professor Emeritus Dr Bjorn Meyerson from the Karolinska Institute, Stockholm, Sweden.

ignorance. An alumnus of the University of Ghent graduating class of 1994/1995 suggests that the more experienced we become, the more transdisciplinary we should become in our way of thinking (Figure 1).

Remember, handphones never have an eternal running battery. When the battery runs out, does our learning end?

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