

Covid-19 and Perceptions of Risk

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The variations in non-expert response to the Covid-19 pandemic are the startling example of the problem between the public's perception of risk and evidence-based assessment of risk. Members of the public inappropriately assign risk in numerous areas in which scientists can assign risk. One example is vaccines – consumers are increasingly resisting vaccines and assigning a high-risk while the evidence-based assessment of risk is low. Another example is genetically engineered food – consumers assign a high risk to GMOs (the colloquial name for genetically-engineered food) while the evidence-based assessment of risk is low. Yet another example is fluoridated water – consumers seek to remove fluoride from the public water supply based on an inappropriate assignment of risk while the evidence-based assessment of risk is low. While all of this is problematic, the short-term consequences of consumers inappropriately assigning risk is tolerable. This is not so with a pandemic; the short term consequences of consumers inappropriately assigning a low risk to Covid-19 is catastrophic.

Consumer perceptions of risk is well-studied, although no single theory or doctrine easily explains the complicated decision-making process. This presentation draws on four main decision-making theories to model the disconnect between consumer perceptions of risk and evidence-based assessment of risk. The four theories are: ambiguity, affect, cultural cognition, and dual process. These theories explain how people make decisions and assign risk. Importantly, none of these theories fully explain decision-making processes and thus by discussing multiple theories, a clearer picture emerges to help understand why some people – and some political leaders – inappropriately assign risk to Covid-19 and the result of that leads to dire consequences.

This inappropriate assignment of risk, that is, that some people – including political leaders – underestimated the risk of Covid-19, is a long-time coming. Decades of anti-science sentiment, distrust of scientists, and a decrease in understanding science has wreaked havoc on the ability for scientists to effectively communicate the risk of Covid-19. Even if the facts are presented, including an evidence-based assessment of risk related to Covid-19, the public's ability to align their perceptions of risk with evidence-based assessment of risk has been so undermined that it is extremely difficult to overcome decades of learned behavior of inappropriately assigning risk.

This presentation tackles the important problem of re-aligning the public's perception of risk with evidence-based assessment of risk.