

How Religious Beliefs can Directly Affect Brain Function and Mental Health: ETAS Theory

Kevin Flannelly, PhD
Associate Director of Research
The HealthCare Chaplaincy

This paper explains a theoretical model that offers the first plausible biological mechanism through which religious and other beliefs can directly affect mental health. The paper draws heavily on current thinking in psychiatry and cognitive psychotherapy about the evolutionary roots of psychiatric symptoms, integrating this with findings on the neural substrates of psychiatric disorders and brain evolution and function. In keeping with other theories in evolutionary psychiatry the present theory proposes that various psychiatric symptoms are the by-products of brain functions that evolved to detect and assess potential animate and inanimate threats in the surrounding environment. The theory explains how threat assessments underlie certain psychiatric symptoms, and it hypothesizes that three specific areas of the brain work together to varying degrees to form one or more Evolutionary Threat Assessment Systems (ETAS). These three brain areas (the basal ganglia, the limbic system and the prefrontal cortex) which evolved at different point in our evolutionary history and make different kinds of assessments. The most primitive of the three structures, basal ganglia makes innate assessments of threats. The limbic system makes emotional assessments, and the prefrontal cortex makes cognitive assessments and conveys important cognitive input to the other structures. Finally, the theory proposes that beliefs about the world are part of the information conveyed by the prefrontal cortex, such that religious and other beliefs are able to directly influence threat assessments and, therefore, psychiatric symptomology.