



What is 'resilience' ?

For a word that is used fairly often, it is a curiously difficult word to define (particularly, in a way that those in the field of mental health can agree on). Merriam-Wesbter defines 'resilience' as *an ability to recover from or adjust easily to misfortune or change*. While that definition may be sufficient when using it abstractly – in objective/scientific terminology in the study of human resilience it has been very challenging to develop a functional definition of resilience.

Much of the major advances in psychiatric research has been our rapidly improving understanding how 'Stress' (another difficult word to define) profoundly effects all parts of human physiology all the way to the genome level. The field of biological psychiatry has produced a lot of findings showing how all types of stressors, particularly early life stress, disturbs normal brain development – rendering people at higher risk to develop a mood or anxiety disorder. Clinician-researchers have a much better idea of what's happening in those at higher risk of mental illness – but other than just saying the converse being resilience – we still have a long way to go.

One part of a functional definition of resilience would include the concept of "stress responsivity" which refers to the variability in how one may react to stressful stimuli. This definition appears to be congruent with the theory of evolution as well as the physiology subserving the human stress response. A challenge, which we will elaborate on later in the chapter, although necessary to address from the start, is the difficulty of developing a generalizable definition for "resilience."

To date, the field of stress neurobiology has largely presumed it to mean the absence of psychopathology after extreme stress. This is, in part, a product of the simple fact that we are still in the early stages of "stress resilience" neurobiological research. As the scientific community continues to further elucidate mechanisms via advancement in methodological approaches as well as innovative methods of investigation, we are optimistic that a more refined and comprehensible definition will be operationalized. Before delving into the various mechanisms involved in stress responsivity, a brief overview of the two major systems, which mediate the human stress response, is necessary, namely, the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic adrenomedullary (SAM) system.