Interest in the influence of psychological factors on susceptibility to certain disease states goes back to the times of Galen, when it was noted that persons who developed cancer often had a "melancholic" personality. Since that time, numerous clinicians have shared anecdotal data concerning the development of cancer or other diseases in persons with certain psychological styles, or after a severe life event, such as bereavement (Locke & Kraus, 1982).

Selye's (1950) work was one of the first to document the general effect of stress on the sympathetic nervous system, endocrine system and lymphatic organs. According to his theory, environmental demands are viewed by the organism as being stressful and produce a common stress response from the organism. This response leads to physiological arousal, and if unrelieved can lead to structural and functional damage to the organism.

Further studies established that activation of the stress response could also be triggered by acute emotions, physical exertion, cold and pain (Cannon, 1953). Later, Lazarus and Folkman (1984), broadened the definition of stress from Selye's concept of "environmental demands" to include psychological components such as appraisal and coping. According to Lazarus and Folkman (1984), stress is "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). While Lazarus and Folkman's theory helped to explain the moderation of stressors by use of coping mechanisms, it did not attempt to explain the possible consequences of these coping mechanisms in terms of physiological effects on immune functioning. A fairly recent theory, Psychoneuroimmunology (PNI), has attempted to bring all of these factors together.

Psychoneuroimmunology started from a multifactorial model of illness which included stress, coping and disease formation (Engel, 1962). This theory was further developed by Solomon (1964; 1985; 1987) to include the impact of stress on the immune system in disease formation. See figure 1 for a graphical interpretation of PNI theory.
Later, the term "psychoneuroimmunology" was coined by Ader and Cohen (1981), to describe the basic phenomena of this theory; interactions between the nervous system and the immune system, and the subsequent effects of these interactions upon disease development/progression. See figure 2 for a graphical representation of the effects of various neuropeptides and hormones upon the immune system. figure 2.
Because PNI theory acknowledges the multifactorial nature of wellness and illness, it is particularly useful as a guide for nursing research and practice (Birney, 1991). See figure 3, interactions in depression, for use of PNI theory in depression.
See figure 4 for a PNI based theory of therapeutic nursing intervention.