

See also Auditory Perception; Event Perception; Human Information Processing; Music Perception; Perception and Cognition; Perceptual Contrast; Perceptual Development; Visual Perception

Further Readings

- Ashby, F. G. (Ed.). (1992). *Multidimensional models of perception and cognition*. Hillsdale, NJ: Lawrence Erlbaum.
- Macmillan, N. A., & Creelman, C. D. (1991). *Detection theory: A user's guide* (2nd ed.). Cambridge, England: Cambridge University Press.
- Quinlan, P. T., & Dyson, B. J. (2008). *Cognitive psychology*. Harlow, England: Pearson.

PSYCHOSOCIAL FACTORS AND CANCER

Psychological and social aspects of life, which have been collectively called *psychosocial factors*, have long been known to play an influential role in shaping physical health and disease. Included in this relatively broad “umbrella” term are processes that involve a person’s mental state, psychological tendencies, and surrounding social environment. Some examples of psychosocial factors include acute stress, chronic stress, coping, perceived control, neuroticism, hostility, anxiety, rumination, hopelessness, negative affect, depression, social class, social conflict, social isolation, self-efficacy, and self-esteem.

This entry provides an overview of research on psychosocial factors and cancer. More specifically, it summarizes different types of cancer, known associations between psychosocial factors and cancer, biological pathways that link psychosocial factors and cancer, and psychosocial interventions that have been shown to alter these biological processes and improve clinical outcomes.

Types of Cancer

Cancer is not a singular disease. Rather, cancer is a term that describes a group of diseases that although similar in gross phenotype, are quite heterogeneous in etiology and pathophysiology. Cancers are broadly categorized according to the

type of tissue in the body where they originate. Cancers that originate in epithelial cells—that is, cells that line the outer surface of an organ, such as skin cells—are called *carcinomas* and are the most prevalent.

Sarcomas are cancers that originate in the connective or supportive tissues of the body (e.g., bone, muscle). *Lymphomas* are cancers that stem from abnormal immune cells in the body’s lymphatic vessels. Finally, *leukemias* are cancers that stem from malignant immune cells in blood (i.e., white blood cells) or other blood-forming cells that occupy the bone marrow. All told, the National Cancer Institute currently recognizes the existence of more than 100 distinct cancers that can occur in the human body.

The Relation Between Psychosocial Factors and Cancer

An association between psychosocial factors and cancer has been pondered at least since the 2nd century CE. At that time, the Greek physician Claudius Galen believed that women with a depressed or “melancholic” disposition were more prone to getting cancer. When examined prospectively over time, most modern studies suggest that no reliable link exists between psychosocial factors and cancer *incidence*—that is, the onset of cancer. However, a growing body of research shows that stress-related psychosocial factors play a role in cancer *progression*—that is, the rate at which an existing cancer in the body worsens or causes mortality.

In this latter regard, studies of breast cancer are by far the most common. This research has shown that several psychosocial factors—including psychological distress, anxiety, hostility, lack of emotional expression, low overall quality of life, and poor familial- and romantic-relationship quality—are associated with shorter survival time in breast cancer patients. The nature of this relationship is complex, though, as some studies have found that low quality of social support, higher anxiety, and higher hostility are associated with *better* survival rates.

Associations between psychosocial factors and clinical outcomes have been examined in other cancers as well, including lung cancer, colorectal cancer, immune cell cancers, skin cancers, female reproductive cancers (e.g., ovarian cancer, cervical

cancer, uterine cancer), prostate cancer, stomach cancer, liver cancer, head and neck cancer, and brain cancers. In studies that have examined lung cancer progression, personality factors, such as defensiveness and anger suppression or repression, which has been called “anti-emotionality,” and other psychosocial factors such as psychological distress and poorer quality of life, have been shown to predict shorter survival time.

In studies of immune cell cancers, depressive mood, depressive coping styles, psychological distress, poor social support, and poor quality of life have been found to predict shorter survival time. Fewer progression studies exist for each of the other cancers listed earlier, and the results of these studies are more mixed.

A key question on the topic of psychosocial factors and cancer involves how exactly psychosocial factors affect clinical outcomes in this disease. This is a complicated issue, given that many different psychosocial factors have been implicated in cancer, and in addition, many different types of cancer exist. Nevertheless, some agreement has emerged suggesting that psychosocial factors affect clinical outcomes in cancer, at least in part, by influencing activity of the autonomic nervous, endocrine, and immune systems.

More specifically, psychosocial factors that involve negative affectivity and social stress are thought to activate two of the body’s main stress systems—namely, the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis—which affect components of the immune system involved in inflammation. Inflammation, in turn, is known to be involved in tumor growth, as well as in promoting several distressing symptoms that at least some cancer survivors experience, such as fatigue, depression, difficulty concentrating, increased pain sensitivity, and social behavioral withdrawal. The exact mechanisms that link psychosocial factors with inflammation and other tumor-promoting physiology are still being elucidated, and this research is being conducted using a combination of methods that include clinical populations, preclinical animal models, and basic *in vitro* techniques.

Interventions

Some of the most potentially important work on psychosocial factors and cancer has focused on

developing interventions that can affect psychosocial and biological pathways to improve clinical outcomes. A landmark randomized controlled trial (RCT) that began in the late 1970s showed that 12 months of weekly group-based, supportive expression therapy extended the survival of breast cancer patients by twofold after 10 years of follow-up.

Since then, two additional RCTs have examined the effect of psychosocial interventions on clinical outcomes in cancer as well as psychological adaptation to having the disease and biological processes that are relevant for its progression. The first of these studies randomly assigned melanoma patients to 6 weeks of group-based therapy that focused on problem-solving skills, stress management, and psychological support versus a standard care control group. During the 10 years of follow-up, the experimental group showed less negative mood, more immune system processes that inhibit disease progression, and lower rates of cancer recurrence and mortality.

A second study randomized breast cancer patients to 4 months of weekly group-based therapy followed by 8 months of monthly group-based therapy that focused on reducing stress, improving mood, altering health behaviors, and maintaining adherence to cancer treatment. During 11 years of follow-up, the experimental group showed less distress, more immune system processes that inhibit disease progression, and less cancer recurrence and mortality. In conclusion, then, there is evidence that psychosocial factors influence biological and clinical outcomes in cancer and that certain psychosocial interventions can affect these processes and yield positive effects.

Donald M. Lamkin and George M. Slavich

See also Chronic Illness, Psychological Aspects of; Health Psychology; Neuroendocrine System; Psychoneuroimmunology; Social Factors in Health; Stress Syndromes; Stressors and Stress

Further Readings

- Antoni, M. H. (2013). Psychosocial intervention effects on adaptation, disease course and biobehavioral processes in cancer. *Brain, Behavior, and Immunity*, 30, S88–S98.
- Antoni, M. H., Lutgendorf, S. K., Cole, S.W., Dhabhar, F. S., Sephton, S.E., McDonald, P. G., . . . & Sood, A. K.

(2006). The influence of bio-behavioural factors on tumour biology: Pathways and mechanisms. *Nature Reviews Cancer*, 6, 240–248.

Chida, Y., Hamer, M., Wardle, J., & Steptoe, A. (2008).

Do stress-related psychosocial factors contribute to cancer incidence and survival? *Nature Reviews Clinical Oncology*, 5, 466–475.

Hanahan, D., & Weinberg, R. A. (2011). Hallmarks of cancer: The next generation. *Cell*, 144, 646–674.

Nausheen, B., Gidron, Y., Peveler, R., & Moss-Morris, R. (2009). Social support and cancer progression: A systematic review. *Journal of Psychosomatic Research*, 67, 403–415.

PSYCHOTHERAPY AND INDIVIDUALISM

Most theories of psychotherapy in the 20th and 21st centuries, since Sigmund Freud, their many sharp disagreements notwithstanding, have presented themselves as a kind of “science,” giving a neutral, objective, or value-free account of human dynamics and change. In line with this claim, most of them view themselves in heavily “instrumental” terms. Above all, counseling and therapy should be “effective.” Means and ends are separate and distinct. Ends or goals are either purely natural or inbuilt—health, well-being, or authentic selfhood—or are freely chosen by the client or patient, independent of any substantial influence by the political, moral, cultural, or religious values of the therapist.

This leaves therapy theory and practice to concentrate on the means to these outcomes. They will be able to conform to the dictum of the distinguished researcher Paul Meehl, who, at the beginning of the era of psychotherapy’s prominence in American society in 1959, warned that therapists should never behave like “crypto-missionaries,” seeking to convert their clients to their own preferred conception of the good life. This entry discusses the underlying values of psychotherapy in relation to individuals and treatment.

Value Freedom and Value Convergence

However, dozens of research studies over the years confirm that counseling and psychotherapy are anything but value neutral. One finding is that

so-called *value convergence* between therapist and client over time seems to be related more closely to client improvement than many other factors, such as therapist credibility and competence. All sorts of professional, moral, even religious values seem important to perceived improvement. Moreover, overwhelmingly, the findings indicate that only clients, not therapists, change their values during therapy and that value convergence is correlated more strongly with therapists’ than with clients’ rating of the client as normal or improved.

This might seem to reflect values “conversion” more than “convergence,” the very thing Meehl feared in the 1950s. In 1996, the psychoanalyst Irwin Hoffman (1996) observed,

When we [analysts] interpret the transference, we like to think that we are merely bringing to the surface what is already “there,” rather than that we are cultivating something in the patient and in the relationship that might not have developed in the same way otherwise . . . our hands are not clean. (p. 109)

Individualism and Disguised Ideology

How can this anomalous and paradoxical situation be clarified where therapists are morally enjoined to be value-free and clients seeking profound influence and direction are supposed to be protected from their therapist’s best ideals for living? The first step might be to acknowledge that psychotherapy, like other important human activities, such as parenting and politics, is deeply historically and culturally embedded and perpetuates some set of cultural and moral ideals from the surrounding society—one in which, after all, clients hope to function successfully. *Health* and *well-being* are always defined, in part, by cultural and moral norms.

The next step would be to realize that precisely this kind of confusion about influence and freedom lies at the heart of perhaps the dominant ideology in contemporary society—namely “individualism” or “liberal individualism.” In the view of many critics, this kind of individualism reflects precious ideals of human dignity, rights, and equal worth but may also be anti-authoritarian and autonomy centered in a dangerously one-sided way. For example, Phillip Cushman has argued