

## **Preliminary Title: Psychosocial influences on cancer: A Meta-Analytic Review**

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### **Background:**

Psychosocial factors among cancer patients have gained increased interest during the last decade (e.g. Breisland et al., 2014; 7, 8, 3). The idea is that psychosocial factors, such as personality traits and coping strategies, influence the outcome of cancer. The outcomes of cancer can be related to the stresses brought on by diagnosis, side effects of their treatments, emotional distress, the impact of cancer on daily life, depression etc (4,7).

Our research questions are:

- 1) What personality traits influence outcomes for cancer patients?
- 2) What coping strategies influence outcomes for cancer patients?
- 3) How are personality traits related to coping strategies?

### **Method:**

The research design for this study is a meta-analysis. Analysis is based on 18 articles in medicine, psychology and sociology, located using the databases PsychINFO, PubMed, Scopus, CINAHL and Sociological abstracts. To be included in the meta-analysis, the article must contain: "personality", "trait", "coping", "patient" and "cancer" in the abstract. Other inclusion criteria were quantitative method, adult patients, and published after the year 2000.

### **Result:**

A high degree of neuroticism has a negative influence on outcomes for cancer patients, while a high degree of internal self-control has a positive influence on cancer outcomes (9).

Characteristics for coping strategies that have a negative influence on the cancer outcomes are: passivity, avoidance, anxious preoccupation, helplessness, suppressions of emotions, deference of one's own needs to the needs of others, repression and substance use (3,6,9). Additionally, the following were found to be characteristic of coping strategies that have a positive influence on the cancer outcome: activeness, resignation, rationality, realism, a problem-orientation and planning-focus (1,6).

People with a high degree of neuroticism seem to repress or avoid their cancer diagnosis and therefore may not effectively or efficiently cope (1,5). The characteristics of people that cope with cancer more efficiently needs to be further explored.

### **Conclusion:**

Coping strategies adopted by neurotic patients prevent them from constructively dealing with difficult situation presented by a cancer diagnosis. Passive behaviors indicate that the patient is overwhelmed by the diagnosis. The patient's preoccupation becomes conscious or unconscious emotional worrying, while repression prevents them from taking action to do something about the situation. The main challenge will be to support clinicians in identifying vulnerable individuals who are likely to have poorer coping strategies and therefore poorer outcomes. According to Shimizu et

al. (2012), coping strategies are considered to be more changeable than personality traits. However, personality traits might be an important step both for useful predictions of coping strategies and explanations of coping strategies. Using screening instruments to identify the degree of neuroticism might be useful for preventive interventions. Exploring the relationship between various traits of personality and coping strategies, and mapping this information against optimal therapeutic responses (such as learned resourcefulness), different kind of adherence and social support as well as digital opportunities, remains the challenge for future research. So far, we can conclude that a high degree of neuroticism is associated with poor coping strategies, while personality traits related to successful coping strategies need to be further explored.

#### **Additional Comments:**

At Veryday we have developed a non-verbal personality measure, in order to capture insights on who a person is and who he or she would like to be. These insights are used to create empowered products and people-centered design solutions. The measurement is based on a personality inventory of the five factor theory, especially adjusted for health and well being (e.g. HP5i). We believe that the personality characters can help us uncover conflicts within a specific user, between a person's real self and ideal self, which might be unconscious or preconscious, but still influences the person's everyday life. At Veryday, the next step in development of this tool is to use the personality characters, as ten different cards, in qualitative interviews with various patient populations, in order to improve understanding of the psychosocial implications of various disease states, and to improve our ability to design patient-centric products and services.

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