CAMPUS ALBERTA APLIED PSYCHOLOGY

Counselling Initiative

Letter of Intent

Rocio Naranjo

The Emotional Heart: Stress and Emotions at Play

Dr. Kenneth J. Barabash

May, 2007
The Emotional Heart: Stress and Emotions at Play

The purpose of this letter of intent (LOI) is to meet the Campus Alberta Applied Psychology (CAAP) Master’s of Counselling final project requirements and to develop a holistic model to assist coronary heart disease clients to achieve optimum state of health. The final project will be based on an extensive review of current literature regarding the influence of psychoneuroimmunology, biological and psychological factors on individual who has suffered coronary heart disease. The implication of these findings in the development of a holistic model will be investigated and possible areas for further research will be recommended. The suggested theoretical model will be reviewed, evaluated, and proposed as an elective instrument for counsellors working in health care area.

Problem Statement

The fact that the mind plays an important role in physical illness goes back to the earliest days of medical science. From the time of the ancient Greeks to the beginning of the 20th century, it was generally accepted that the mind can affect the course of illness (McEwen & Norton, 2003). However, in the last century, and especially in the last decade, entitled by some as “The Decade of the Brain,” scientists have learned more about the brain and its functions than in the whole history of psychology and neuroscience (Damasio, 2002). The field of mind-body has had a huge impact on the understanding of health and illness. As a result, the neurobiological basis of the mind and its influence in body’s response has become a large and overwhelming area of research (Oakley, 2004). The explosive growth in animal and human studies has provided a much clearer picture of the ways in which behavior and emotions modulate biological functions and influence the course of illness.
The rapid growth in psychosomatic medicine served as an umbrella of hybrid disciplines that extend the understanding of the functions of interacting systems. Such is the case of psychoneuroimmunology (PNI), a term coined by George F. Solomon in 1964. PNI is not well-defined, except to say, “It seeks to shed light on how mental events and processes modulate the function of the immune system, and how, in turn, immunological activity is capable of altering the function of the mind” (Daruna, 2005, p. 54). Furthermore, interdisciplinary research and empirical data has demonstrated the neuroendocrine and the immune effects of psychosocial stress and emotions in individuals’ lives (Friedman, Klein, & Friedman, 1996; Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002).

How individuals react to stress and emotions is considered a complicated issue for many scientists (Friedman et al., 1996). However, researchers have affirmed that the impact of stressful life events depends on the psychological profile and the context resources of the individual (Kiecolt-Glaser et al., 2002). Moreover, it was stated that social and family support may be significant factors of protection against sickness (Friedman et al., 1996).

The increased awareness of the importance of psychosocial and behavioral risk factors in the general medical community has contributed to the expansion of research and understanding of different illness such as coronary heart disease. In recent years, the INTERHEART study of risk factors for myocardial infarction (Sheps, Frasure-Smith, Freedland, & Carney, 2004) has emphasized the importance of the role of bio-behavioral contributions to health status. This study was conducted in 52 countries representing every inhabited continent and included 15,152 cases and 14,820 controls. From the results of the study emerged the conclusion that psychosocial risk factors including stress, depression,
and low generalized locus of control, were the most common risk factors and responsible for 32.5% of ascribed risk for myocardial infarction in the studied population (Sheps, et al. 2004).

On the other hand, the actual management of coronary heart disease recognizes there are a variety of effective treatments including drugs, exercise, surgery, and rehabilitation. Modern cardiac rehabilitation is a multidisciplinary activity that requires a range of health skills to bring together medical treatment, education, counseling, and risk factors’ modification (Lewin, Ingleton, Newens, & Thompson, 1998). In the same way, modern cardiac rehabilitation considers important the creation of an atmosphere that infuse feelings of safety, connection, and a sense of community to limit the harmful physical and psychological effects of heart disease, and to reduce the risk of death or recurrence of the cardiac event (Guarneri, 2006). A variety of programs have emerged representing new directions in the holistic management of coronary heart disease. Sweeney and Witmer (1991) and Witmer and Sweeney (1992) presented the Wheel of Wellness model as an alternative to the traditional, illness-based medical model for treatment of mental and physical disorders. In a similar way, Dean Ornish's (1998) non-surgical, non-pharmacological approach to reversing heart disease, has been recognized as a successful program, using stress management, techniques for improving communication, and interpersonal relationships and modification of lifestyle factors, such as exercise, diet, meditation, and spirituality (Myers, Sweeney, Witmer & Witmer, 2000; Ornish, et al. 1998).

Project Rationale
Heart disease is one of the major causes of physical illness, disability and death in Canada (Heart and Stroke Foundation, 2003); it is also one of the most prevalent diseases in the world (National Heart, Lung, and Blood Institute, 2002). Despite the presence of remarkable interventions and surgical procedures, resulting in fewer patients dying in the acute stage of this illness, over 650,000 new heart attacks occur annually in United States (Guarneri, 2006). In treating the consequences of this major illness, it has been suggested that physical and mental health practitioners can work collaboratively reflecting an understanding that the body is inseparable from the mind (Friedman, Klein & Friedman, 1996).

Psychoneuroimmunology researchers have found that physiological and psychological responses of humans being cannot be conceived as a separate reaction (Sternberg, 2001). Moreover, it has been stated that the mind and other human body systems, reacts as a whole to determine health or illness (Kiecolt-Glaser et al., 2002). The recognition of the interconnectedness of all systems of the organism implies a breaking of paradigms about the importance of the mind over the body (or vice versa), and the acceptance of the flow of information throughout the whole organism (Pert, 1997). New discoveries provide foundation for body-mind interrelationship and researchers have remarked on the important role of both of them as parts of the whole (Friedman et al., 1996). For example, the most extensive support for connections between affective dispositions and disease comes from epidemiological research with coronary heart clients (Suls & Bunde, 2005). It was found that coronary heart disease is an illness endpoint where the immune, endocrine, and nervous systems were compromised (McEwen, 2003; Suls & Bunde, 2005). Hence, based on the above-mentioned evidence, a comprehensive study
about the interconnection of human systems necessitates the formulation and development of a more complex model for the prevention and intervention in health psychology. The purpose of this proposed final project is to develop a holistic model in which the body and the mind are integrated in the management of the individual who has suffered coronary heart disease. The development of such a model has the potential to assist health practitioners, counsellors, and clients, with practical guidelines for integrating the management of psychological and biological factors into cardiac rehabilitation. This project has two central purposes: (a) to provide a broader understanding about the human’s systems interconnections in coronary heart disease, and (b) to develop a holistic model to improve the treatment of psychological and social factors on coronary heart disease clients. The final project will be focus primarily on programs developed previously in North America. Further, it is important to state that this final project will provide pioneering information in Ecuador, South America, in its attempt to be applied to the Latin American population.

Supporting Literature

Since 1948, the World Health Organization (WHO) defined health as “a state of physical, mental and social well being and not merely as the absence of disease or infirmity” (World Health Organization, 2004, p. 16). WHO (2004) stated that mental health is intimately connected with physical health and behavior. Recognizing that the concept of health includes and links biological, psychological, and social factors, the development of illness should recognize the misbalance of these three mentioned factors.

A great numbers of researchers have provided consistent evidence that illnesses, including coronary heart disease, are the result of a combination among physiological,
biochemical and psychological, social, and cultural factors (McEwen, 2003; Petrie, Cameron, Ellis, BMW, Buick, & Weinman, 2002). Moreover, mind-body connections have engendered a great deal of research over the past two decades, in terms of the beginning, the development, and the establishment of illnesses. Specifically, coronary artery disease has been extensively studied from different views. Classical studies, such as the Framingham Heart Study during the past 50 years (National Heart, Lung, and Blood Institute [NHLBI], 2002), have determined the importance of biological factors in the development of coronary artery disease. Smoking, hypercholesterolemia, high blood pressure, diabetes, lack of exercise, hyperuricemia, and Chlamydia infections are just some of the biological factors identified as prevalent causes of coronary heart disease (NHLBI, 2002). Evidence linking various psychosocial factors with coronary artery disease has grown so strong that the Journal of the American College of Cardiology recently published an article on the emerging field of "behavioral cardiology" (Center for the Advancement Of Health, 2005). Many studies lend support to these findings. Kuper, Marmot, and Hemingway (2002), for example, concluded in their study about psychosocial factors in the etiology and prognosis of coronary heart disease that there was evidence for an association between depression, social support, and psychosocial work characteristics and coronary heart disease etiology and prognosis. Evidence for an effect of anxiety or type A behavior was less consistent (Kuper, Marmot, & Hemingway, 2002; Petrie et al., 2002; Sternberg, 2001). As well, Suls and Bunde, (2005) in their investigation about anger, anxiety and depression as risk factors for cardiovascular disease, concluded that the overlap among the three affective dispositions might be factors for coronary heart disease. Moreover, they concluded that these three emotions may all increase risk because they are both chronic and
intense negative emotions. However, they left open the possibility that a general disposition toward negative affectivity may be a disease risk more than any specific negative affects.

In conclusion, a broader understanding of the complexity and interconnectivity of the human system might have important implication for the effectiveness of the assessment and management of diseases in general and for coronary heart disease in particular.

Project Procedures

An extensive literature review in this field will be developed in order to attend the demand of health practitioners and coronary heart disease clients; and to better comprehend the role that body-mind connection play in health and illness, specifically in coronary heart disease. Based on information acquired by an extensive literature review, a holist model for coronary heart disease management will be developed.

Steps 1 through 8 in the “Literature Review Process” outlined by Mertens (1998) will be closely followed. Adhering to Step 1 “Identify Research Topic” will ensure that the author will remain flexible in the conceptualization of the problem and open to new directions for research. An initial literature review served to identify the topic of the present investigation and to develop a justification for the final project. Step 2 “Review Secondary Sources” will include books and literature reviews from journals in order to get an overview of PNI, the cornerstone discipline in the project, as well as information about coronary heart disease because of the complexity of the topic.

With regards to Step 3, “Develop a Search Strategy”, the present author plans to develop the research in three main areas: (a) emotions and the organic immune, endocrine, and nervous response, (b) PNI, as a new field to explain the origin and development of coronary heart disease; and (c) suggested management and considerations in coronary heart
disease rehabilitation. The bibliographic index used to conduct searches in this field will include PsycINFO, OVID and Medline. The main research journals to be used include Psychosomatic Medicine, Health Psychology, Brain, Behavior, and Immunity and Neuropsychobiology. These databases contain articles that offer a historical perspective, discussion of the studies, and research reports that will provide context for the topic under investigation. To evaluate research articles and Internet information, the author will follow suggestions of UC Berkeley (2005). In order to inquire about professional expertise as a source of knowledge, personal interviews will be conducted with physicians working in the area of Cardiology at Axxis, Medical Center and other associated cardiologists in Quito-Ecuador. Finally, the present author plans to provide contributions of personal experiences as part of a cardiac rehabilitation team working with coronary heart disease clients during the past nine years.

With regards to Step 4, “Conducting the Search,” more specific research will be performed by searching articles with information about the latest findings in the field of PNI, keeping in mind that this is an area with a global perspective in a broad range of issues and diseases. In addition, the present author plans to identify journals entirely dedicated to the topic of cardiac rehabilitation and cardiac rehabilitation programs in order to get a deeper understanding about investigation and perspectives in the related field.

Through the research process, bibliographical information will be read and notes will be prepared, summarized and presented, according to Step 5. “Reflective Questions” (Leedy & Ormrod, 2005) will be used to evaluate the quality of methods, results, and conclusions presented by other researchers’ work and literature review, according to Step 6. To find primary sources and identify key points, evaluation of research reports, analysis
of research procedure, and the synthesis of results, will be arranged according to guidelines and suggestions by Mertens (1998), and in accordance to Step 7. The inclusion/exclusion criteria to the review literature will be determined by guidelines specific to sections of the research report. In addition, in order to ensure current findings and research data, the literature review will include articles (75% or more) published after the year 2000.

Finally, as suggested in Step 8 “Analyze the Research Findings and Synthesize Results,” the present author plans to utilize a content analysis making the process as objective as possible. For this purpose, the author plans to utilize a narrative synthesis approach, to systematically review and synthesize the findings from multiple studies. As well, the author will employ grounded theory approach to develop a literature review and to construct a theoretical model from it (Leedy & Ormrod, 2005).

In order to provide a comprehensive literature review, the present author will include literature from 1990 to present. Once the literature review is completed, the emerging model of management of biological, psychological, and social factors on coronary heart disease clients will be developed. This emergent model, being easily understood and implemented, will have the primary purpose to serve as an optional guide for practitioners and clients. Because of the nature of the present project an ethical board review it is not required.

Potential Implications of the Project

Through the development of this final project, it is the belief of the author that the approaches available for health practitioners and individuals with coronary heart disease will broaden. First, the integration and implications of concepts around health and disease within a PNI framework is necessary if we wish to expand the knowledge and the
understanding about the origin, development, treatment and prevention of coronary heart disease.

Finally, it is believed that this holistic model can be used as a psycho educational resource to create social awareness about heart disease and prevention. Further, it will serve as a guidance and conceptual framework to integrate the management of psychological, social, and cultural factors into cardiologic practice.

Summary

The premise of this project is based on the present author’s conviction that concepts surrounding health and illness involve more than one area of knowledge. Therefore, health practitioners can not deal with the parts of a situation in isolation; they need to deal with all the elements of a situation and how they interact with one another.

Human beings are complex and fascinating creatures and PNI gives light to understand this complexity. The mind-body conception incorporates ideas and belief systems, and hopes as well as biochemistry, physiology, and anatomy factors to provide a baseline from which we can understand human life experience, health, and disease (Oakley, 2004).

A holistic model to manage biological, psychological, and social factors on coronary heart disease clients will be developed with the finality to assist health practitioners, counsellors and clients, with practical guidelines for integrating the management of the above mentioned factors into cardiac rehabilitation. The author believes that ambulatory patients are able to make and maintain comprehensive changes in lifestyle to ensure their survival in a process of collaboration among psychological, biological, and social elements. This belief is based on the ancient idea that dates back to Hippocrates that
body, mind, and emotions form an ordered field of energy that is disrupted by illness (Guarneri, 2006).
References


delivered? Institute of Rehabilitation, Faculty of Health, University of Hull, Hull HU3 2PG BMJ.


