Art Therapy and Neuroscience: The Mind–body Connection

Letter of Intent for CAAP Final Project

Campus Alberta Applied Psychology

Carolyn Husky

Supervisor: Dr. Paul Jerry

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Art therapy is a powerful tool that has been used in the medical setting for years (Ganim, 1999; Malchiodi, 1998, 1999a, 1999b, 2003; Pratt & Wood, 1998). Art therapy has been used as a means of connecting the mind and body in relation to health with many populations (e.g., cancer, chronic pain, stroke, HIV/AIDS, eating disorders, asthma etc.) (Malchiodi, 1999a, 1999b), to access the body’s relaxation response, and trauma (Malchiodi, 2003). Art therapists have recognized and witnessed in their work with clients, transformation, growth and healing, and the connection of the mind and body.

Problem Statement

The medical community’s interest in the mind-body connection has important ramifications in the field of art therapy. Early research on the mind-body connection by Carl Simonton (1978) is an example to the medical communities’ long standing interest in the mind-body connection and is exemplified in Simonton’s work with cancer patients. Art therapist, Cathy Malchiodi (2005), states that “mind-body medicine is a popular term used to describe an approach that views the mind as having a central impact on the body’s health” (p. 16). Pert (2002) speaks of the mind-body connection in terms of science explaining that “neuropeptides and their receptors are a key to understanding how mind and body are interconnected and how emotions can be manifested throughout the body” (p.30). Lusebrink (1990) explains that images are “the bridge between body and mind, or between the conscious levels of information processing and the physiological changes in the body” (p.218). Research in art therapy is only beginning to explore why art therapy is effective in mind-body intervention or method (Malchiodi, 1993, 1999a, 2003, 2005). The purpose of this literature review is to review scientific study that may
account for and explain the mind-body connection experienced in art therapy, to answer
why and how art therapy works, to identify implications for practice and to outline
further direction for research in the field of art therapy.

Rationale

Advances and research in the field of neuroscience has set the stage for research
and further understanding of art therapy in explaining the science of the mind-body
connection in art therapy. Research in psychoneuroimmunology has contributed theories
through which it may be possible to explain the science of art therapy; understanding the
how and why of art therapy. The works of Rossi (2002a, 2002b, 2004a, 2004b, 2005),
(2002) are of great importance in understanding the mind-body connection and the
influence of negative emotions on the immune system. This research may is essential in
understanding the mind-body connection and art therapy.

Components of the Review

Components within the body of this review will first address the limited research
in the art therapy community in regards to the scientific understanding of why art therapy
intervention is successful. Secondly, Ernest Rossi’s research on gene expression, will be
reviewed as a possible framework for understanding how creative expression affects the
brain and potential ways the field of art therapy may incorporate this framework in future
research as a way of studying the mind-body connection. Thirdly, the work of Candace
Pert will be discussed from the neuroscience perspective, in terms of the expression of
emotion through neuropeptides and their receptors and how this relates to the mind-body
connection. This research may provide possible explanation for the benefit of art therapy
through the expression of emotion to facilitate healing. Fourthly, Kieclot-Glaser et al. (2002) research will be examined regarding the effect of negative emotions on the immune system and how this may impact the mind-body connection. Finally, the implications of this review will be discussed as related to art therapy practice and possible direction for further research will be established.

Reference to the Literature

Numerous case studies exist documenting the power of art therapy or the meaning of images (Kaplan, 2001). Few studies venture into hard science. Lusebrink (2004), Riely (2004), and Boyko (2005) are a few of the exceptions. These researchers have examined the science of the mind-body connection as it relates to art therapy. Lusebrink’s (2004) research outlines the relationship between brain function and artistic expression. Riley (2004) addresses the importance of the brain function in relation to imagery, visualization, and how this can be helpful in working with clients. Boyko (2005) conducted research based on the work of Rossi, using neuropsychological measurement in a single art therapy case study.

The field of neuroscience and more specifically psychoneuroimmunology has contributed research to the understanding of the mind-body connection. Ernest Rossi (2002a, 2002b, 2004a, 2004b) has done extensive research on gene expression, neurogenesis, and the human experience in mind-body medicine, through the scientific discipline of psychosocial genomics. Pert, Ruff, Weber, & Herkenham (1985) have also found that neuropeptide receptors are located throughout the body, and that the neuropeptides are the information carriers of the body. The information neuropeptides carry sends messages through out the body to other neuropeptide receptors. It is these
neuropeptide receptors that hold the “keys to the biochemistry of emotions” (Pert, 2002, p. 31). Pert’s (2002) research has indicated that the brain and the immune system have the same receptors. Kieclot-Glaser, McGuire, Robles, & Glaser (2002) have shown that negative emotions have been linked to certain health risks. When looking at art therapy as a mind-body intervention, perhaps the healing and growth witnessed may be understood in terms of the expression of emotion which encourages on a molecular level the neuropeptide and receptors of the body to communicate with other systems of the body.

Methods

The main purpose of this literature review is to gather research that may provide insight into the study of why and how art therapy is successful in mind-body interventions. I will review the literature to determine both research and theory that pertain to this topic, and delineate the prominent arguments. My intent is to offer greater understanding of how art therapy is successful in mind-body interventions based on the research findings.

In performing this literature review, I will follow the search strategy suggested in Mertens (1998). The search strategy used for this review will involve the use of PsycINFO, Ovid Medline, World Wide Web, and reference lists of relevant articles and texts. Limits for PsycINFO, and Ovid include searches for articles after 2000. Earlier references will be included only if they are considered important seminal works. Key words used for this search will include: “art therapy”, “neuroscience”, “emotion”, “mind-body”, “healing”, “immune system”, “psychoneuroimmunology”, “gene expression”, and “healthcare”. The Yahoo search engine will be used for the World Wide Web searches. Gathering of data will continue until the researcher has found the references of the
articles provide no further information relevant to the specific topic to be studied, and repetition of mentioned authors is encountered (Mertens, 1998).

Implications

It is possible that gene expression, and neuropeptides and their receptors in combination with the chemical substrates of emotion may provide information to study why and how art therapy is successful in mind-body interventions. Research in the field of neuroscience, and the discipline of psychoneuroimmunology have illuminated important features in the mind-body connection. The conclusions of this review could serve many purposes. Firstly, it is possible that these finding may carry over and be helpful in understanding and directing the healing effects of creative expression in art therapy intervention. Further understanding of the mind-body connection may inform implications for practice in art therapy and as a result clients would benefit. Secondly, it is promising that with further research, we may be able to fine tune art therapy interventions to specifically target systems in the body to encourage health and healing. Thirdly, it may also suggest that collaborative research in the fields of neuroscience and art therapy could prove to be beneficial to both disciplines and the greater healthcare field. Finally, it is hoped that this review will inspire further research activity in the art therapy community.

References


Lusebrink, V. B. (2004). Art therapy and the brain: An attempt to understand the


