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Clay Art Therapy for Physical, Psychological and Cognitive Improvement

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Abstract

There is increasing evidence of close correlation between physiological and psychological aspects of human experience. Touch is one of the basic human experiences in loving, secure, memories, ability to solve the problems, sexuality, disease and injury. Clay is a familiar art therapy, natural material, and easily found. When hands touch clay, exteroceptors and interceptors become naturally stimulated, and every movement of the hands provides instant feedback to the brain, allows non-verbal access to psychological and sensorimotor processes. Clay art therapy might increase gamma power in the right medial parietal lobe and elevate theta power, activated memory processes, meditative and emotional states, and spatial-temporal processing. There was salivary cortisol levels decrement which improved mood and decreased anxiety when did clay art therapy in hopelessness patients with stroke and epilepsy. The muscle rigidity, tremors, fatigue, speech, and sleep disorders in patients with Parkinson's disease showed improvement after clay art therapy. The caregivers used it to lessen symptoms of fatigue and reduce their stress. In patients with cancer and chronic diseases, it could be used for stress and negative emotions relief and positive emotions stimulation. Therefore, more research and more implementation of clay art therapy should be done in patients with chronic conditions at home. It may be used at home during this COVID-19 pandemic as well.

Keywords: Clay art therapy, Physical, Psychological, Cognitive, Patients with chronic conditions INTRODUCTION

Globally, there is a tendency to provide the home care and making process is interactive between patients, materials, appropriate therapies for shorten the duration of hospitalization. The aim of home care is to resume the activity of patient in a familiar living environment, improve the quality of life (QOL), reduce the burden on caregivers, and prevent the new disabilities by assisting in what the patient desires to do.

Clay art therapy is often used more than other types of art therapy because it is easily found, both natural clay and artificial clay, and inexpensive. Clay is flexible and through touch with the hands movement and tactile

and their environment including caregivers. ^{1-5,7-11}

The author does this narrative review for inspiration of more research and implementation of clay art therapy in patients with chronic conditions. It may be used at home during this COVID-19 pandemic as well.

What is clay art therapy?

Art Therapy is emerged as a complementary therapy method for decreasing patients suffer. 1-5,7-11 It provided self-expression, self-recognition, effective communications, manipulation with molding the clay by creativity and and reconnecting with the world by being aware of their imagination, stimulating all of the body senses. Clay art impairment. Medical art therapy proved to provide several \mathcal{O}

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benefits for patients. It makes patients forget their illness during active thought and alert states. Gamma waves or loss of ability as a result of the creative activities have the highest frequency and are correlated with performed. Medical art therapy consists of music, painting, clay, sculpture, etc.

Clay art therapy is often used in medicine for therapeutic Clay art therapy allowed hopeless patients to be more purposes. There are medical benefits of clay such as touching, modeling, developing a sense of creativity, and non-verbal communication. It has a rehabilitating neurological effect on the self-confidence of the individual, aesthetic sensibility, patience, a sense of cooperation and solidarity. disciplined working. eliminating fighting impulses and a sense of anger and revenge. 1-5,7-11

Evidence of clay art therapy

Chronic stress and anxiety can increase the risk of physical pathology such as cardiovascular disease, autoimmune diseases, gastrointestinal problems, low sleep quality, weight gain or weight loss, and cognitive impairment. Inpatients or ones suffering from chronic diseases are often afraid to express their distress or emotions verbally. These may impact the level of hope, quality of life, and even life span. Hope plays an important role in allowing patients to add meaning to their lives, strengthen their motivation, and avoid anxiety, depression, and even suicidal tendencies. Therefore, coping with illnesses by gaining autonomy through clay art therapy seems quite appropriate since reality cannot be denied. 1-5,7-11

Clay-sculpting has been shown to activate memory processes, induce meditative and emotional states through elevated theta wave frequency, and enhance spatial-temporal processing in the brain. Kruk et als ⁵ conduct a preliminary experimental study examined brain wave frequency patterns of 14 female participants in clay sculpting and drawing. The quantitative electroencephalographic (qEEG) were recorded at bilateral medial frontal cortex and bilateral medial parietal cortex of each participant. They found that clay sculpting increased gamma power in the right medial parietal lobe and elevated theta power. The results showed the importance of the right medial parietal lobe in Clay-sculpting which activate memory, meditative and emotional states, and spatialtemporal processing. Delta waves are expressed during deep sleep states. Theta waves are expressed during imaginative states and activities that require internal focus as meditation. Alpha waves are expressed in relax and normal conscious. Beta waves are expressed

synthesis, simultaneous processing, and informationrich task processing.⁶

active and think positively.

It had the ability to expedite emotional expression, concretize and symbolize more abstract concepts like thoughts and feelings. It led to significantly decrease in salivary cortisol levels, improve mood and decrease anxiety. Akhan Lu, et als ⁷ performed clay art therapy on 50 neurology patients: 17 epilepsy and 33 stroke patients. The patients were asked to create any shape of clay they preferred. After clay therapy, the Beck Hopelessness Scale (BHS) were lower in women, in married patients, in stroke and chronic disease patients, people without psychological illness, and children.

Bae YS, et als ⁸ investigated the effect of clay art therapy in 54 Parkinson's disease (PD) patients. There were significant better in hand dexterity, selfexpression, mood depression, and quality of life in the clay art therapy group compare to control group. Moreover, free clay manipulation is an effective sensorimotor modeling which helps alleviate muscle rigidity, tremors, fatigue, impaired speech, and sleep disorders as well.

Kaimal G, et als 9 conducted a quasi-experimental study in 39 healthy adults to investigate the impact of visual art making, including clay art therapy on the cortisol level. They found statistically significant lowering of cortisol level. The salivary cortisol, glucocorticoid hormone, is a noninvasive biomarker for measure stress in humans. The hypothalamic-pituitaryadrenal axis (HPA axis) regulates reactions to physiological stress. Several clinical studies have reported reductions in salivary cortisol levels after interventions to reduce stress. The concentration of cortisol in saliva is independent of the salivary flow rate and is strongly correlated with serum cortisol concentrations.9

The clay therapy has allowed patients to experience, in a less painful way, their difficulties, conflicts, fears and anxieties. It was an effective way of guiding mental illness in a positive way, as well as solving the personal and family conflicts. The negative factors of affective and emotional nature in the mental disorder

such as depressive feelings and anxiety, stress, fear, aggression, social withdrawal, and apathy were minimized. The patient's opinion of clay art therapy was valuable, which helped them to be calmer, hopeful, happiness, as well as providing positive energies, better social interaction, relieving the symptoms of the illness and decreasing negative energies. ^{10,11}

Conclusion

Clay art therapy promoted touch for being secure, linked to earliest memories, ability to coping the disease and social interaction. It promoted creativity, self-consciousness, and relief anxiety. This review demonstrated evidence of clay art therapy for physical, psychological and cognitive improvement. Therefore, clay art therapy should be encouraged for more research and implementation in patients with chronic conditions. It may be used at home during COVID-19 pandemic as well.

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