

LAUGHTER YOGA THERAPY: EFFECTS ON MENTAL HEALTH OF COVID-19 INFECTED CLIENTS

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ABSTRACT

A pretest and post-test experimental research design to measure the effects of laughter yoga therapy on the resiliency, recovery, and mental health of COVID-19 infected clients admitted at the CIU-TTMF. The majority of the participants were males aged 26 to 35 years old, college graduates, and employed. Participants were asked to complete a Pre and Post Intervention Survey using the 5-point Likert scale to measure the immediate effects of Laughter Yoga Therapy. Participants were asked to answer the following: Personal Well-being Index to measure the global life satisfaction, DASS-21 to assess self-reported depressed mood, anxiety, and stress. Participants also rated the Brief Cope Scale to measure resiliency and the post-COVID-19 Functional Status (PCFS) scale to measure recovery. The pretest and post-test scores showed a statistically significant resiliency, recovery, and mental health gain. The study was triangulated with FGD using some of the questions from the Psychological Outcomes of Well-being (POWB) as a guide to examine the research problem. As a result of the study, Laughter Yoga Therapy encourages clients to laugh through the body and not through the mind, and experiencing childlike playfulness, affects the recovery, resiliency, and mental health of COVID-19 infected clients.

Keywords: Laughter Yoga Therapy, COVID-19, resiliency, recovery, mental health.

INTRODUCTION

A new virus and disease outbreak in Wuhan, China, was first identified as NCOV-19 in December of 2019. The novel coronavirus disease (COVID-19) is an infectious disease caused by a new strain of coronavirus. It is a defining global health crisis that challenged most countries around the globe and has affected the lives of everyone in the world. The pandemic is far more than a health crisis. It stresses every country that it touches; it can potentially create devastating social, economic, and political effects, but it also has the potential to leave deeply rooted scars on

individuals affected by COVID-19 (UNDP, 2020). It targets their immune system, mental health, and well-being, making them more vulnerable to stress, anxiety, and other psychosocial problems. Clients are placed in a quarantine or isolation facility, where Activities of Daily Living (ADL) may be restricted by limited space. Normal socioeconomic functions are altered, and the challenges of being away from home and isolated from their loved ones, thus, being away from their comfort zone.

We have all heard the saying that "Laughter is the best medicine." It has proven to be powerful as it attracts people together in ways that stimulate healthy physical and emotional changes in the body. Laughter strengthens our immune system, boosts mood, diminishes pain, and protects us from the damaging effects of stress. With so much power to heal and renew, the ability to laugh easily and frequently is a tremendous resource for surmounting problems, enhancing our relationships, and supporting our physical and emotional health (Robinson, Smith, & Segal, 2019).

As part of looking at the welfare of all clients admitted to the TTMF, the daily structure of activities is given to them as an integral aspect of the holistic treatment method. One is the Laughter Yoga Therapy, acknowledging that providing mental health and psychosocial support is essential during the pandemic. The head of the Isolation Facility Management Unit, the researcher, would like to explore the effectiveness of Laughter Yoga Therapy in clients infected with COVID-19 in terms of their mental health, resiliency, and outlook toward recovery. Thus, this study.

OBJECTIVES

This study assessed the effects of laughter yoga on the resiliency, recovery, and mental health of COVID-19 and their influence on infected clients' in the Temporary Treatment and Monitoring Facility. Specifically, this study sought to answer the following questions:

1. What is the socio-demographic profile of the COVID-19 infected clients?
2. What is the participants' level of resiliency, recovery, and mental health level?
3. Is there a significant difference in the participants' resiliency, recovery, and mental health before and after the laughter yoga therapy?
4. Is there a significant relationship between the mental health and socio-demographic profile; laughter yoga therapy; resiliency; and recovery?
5. Which of the variables, singly or in combination, best predict the mental health of the COVID-19 infected clients?

THEORETICAL FRAMEWORK

The Relief Theory of Laughter, Theory of Resilience, Theory of Subjective Well-being, Tidal Model of Mental Health, and the Recovery Model on Mental Health were the theories and models that anchored this study.

The Relief Theory of Laughter by Shaftesbury (1709) explained that a hydraulic explanation during which laughter does within the brain, specifically the nervous system, is what a pressure-relief valve does during a boiler. The Theory of Resilience by Garmezy (1984) argues that it is not the nature of trouble that is essential but how we deal with it. When we face adversity, misfortune, or frustration, resilience helps us recover. The Theory of Subjective Well-being (SWB) Homeostasis by Headey & Wearing (1989, 1992), on the other hand, states that a dynamic biological mechanism is regulated to maintain a positive perspective of life. Lastly, the Recovery Model on Mental Health emphasizes and supports an individual's potential for recovery, as recovery is usually seen during this approach as a private-personal journey.

METHODOLOGY

Research Design

This study used pretest and post-test experimental design to measure the effects of laughter yoga therapy on the resiliency, recovery, and mental health of COVID-19 infected clients. Changes in the outcome of interest in the study are presumed to result from the intervention or therapy. No control or comparison group is employed for this study. This study used descriptive correlational and causal research designs to answer the research problems, obtain information concerning the current status of the phenomena, and describe what exists between the variables or conditions in a situation (Owan, 2020). This study is triangulated with a focus group discussion to examine a research problem than a methodology, characterized by a focus on research problems that require an examination of real-life contextual understanding.

Participants of the Study and Sampling Procedures

The study population is the clients confirmed to be infected with COVID-19 and admitted to the Temporary Treatment and Monitoring Facility (TTMF) from February to March 2021. Participants were primarily residents of Cagayan de Oro City, Philippines, could speak the local language (Bisaya) and English, and were 18 years old.

Research Instruments

Participants were asked to complete a Pre and Post Intervention Survey using the 5-point Likert scale that included measures of resiliency, recovery, subjective well-being (mental health), and

general positive mood. It also included negative emotions such as depressed mood, stress, and anxiety. Demographic information was collected as part of the Time 1 questionnaire. A guide for the focus group discussion was also made available using the Psychological Outcomes of Well-being (POWB) form as a reference. POWB was developed by Kataria (2014), the Laughter Guru, to measure the immediate effects of Laughter Yoga Therapy.

Data Gathering Procedure

Before conducting the study in the TTMF of LGU-CDO, the researcher secured approval from the COVID-19 Task Force of the Emergency Operating Center and the Patient Monitoring and Management Team of the Health Cluster and presented to the board the survey questionnaires that were used to gather data from the participants. The researcher did a courtesy call to the TTMF staff.

Using a simple random sampling technique - the fishbowl method and Sloven's formula, the researcher identified 182 participants from the 333 total population of clients currently admitted from February to March 2021 from the different TTMFs Cagayan de Oro City, specifically CIU-TTMF 5, 25, and 28. Before the actual data gathering procedure, a pre-administration was carefully observed by setting schedules for actual data gathering and conduct of the FGD, ensuring that it is within the routine and daily structure of activities of the participants in the facility. The researcher observed the identification and preparation of an area for the conduct of the study. The conference room or activity room in each TTMF was utilized. A pre-discussion with the respondents for clarification and instructions on the tools was also done. The researcher shall adhere to transparency, legitimate purpose, and proportionality in collecting, retaining, and processing the respondent's personal information during the data-gathering procedure (Data Privacy Act of 2012).

The participants were asked to sign an informed consent to participate. Participants can freely participate in the study, and the researcher's position should not influence their participation. They should not feel threatened should they decide not to join, and it will not take it against them. There is no penalty or loss of benefits for either decision. In collecting data through the questionnaires and Focus Group Discussion, the researcher wrote each questionnaire with a code unique to each participant. A pre-test and post-test were given and collected right after the participants answered. The study participants committed 10 -15 minutes to answer the questionnaires. Moreover, the researcher organized and conducted a Focus Group Discussion with 10 participants and 20 clients from two selected TTMFs. CIU-TTMF 5 and 28, respectively.

Data Analysis

The analysis of the quantitative data was done using statistical software. The researcher used descriptive statistics to calculate the frequency values; used the percentage to express the importance of qualitative variables. Mean and standard deviation was used for the descriptive data. Paired sample t-test, sometimes called the dependent sample t-test, was used to determine whether the mean difference between two sets of observations was zero. Pearson-product moment correlation was utilized to establish the relationship between the independent and dependent variables. Multiple regression was used to best predict the dependent variable.

To identify the information (IV) that plays a significant role in data gathering and to understand better the background and characteristics of the participants in the study. Descriptive statistics, mean, frequency, and standard deviation were used to organize the data to identify the participants' current mental state regarding resiliency and Recovery from COVID-19. To determine whether or not Laughter Yoga Therapy affected the participants' resiliency, recovery, and current mental state. Analysis of Covariance (ANCOVA) was applied where the pre-tests served as the covariate. To determine if the participants' socio-demographic profile influences their ability to cope and thrive thru life's challenges and whether laughter yoga therapy helps in their resiliency, recovery, and overall mental health, Pearson Product-Moment correlation was employed for the analysis of this data. Lastly, multiple regression was utilized to determine whether the variables presented best predict the mental health of COVID-19 infected clients, especially those in the TTMFs.

Validity and Reliability

Tests of validity and reliability of the research instruments used for the study were conducted to measure the model. Reliability and validity are essential to selecting a survey instrument (Middleton, 2020). Determined tests on the reliability of the instruments to ensure the internal consistency of the measure of the tools used was done. Middleton (2020) should consider reliability throughout the data collection process. Results must be precise, stable, and reproducible. The coefficient alpha (or Cronbach's alpha) was used to assess the internal consistency of the questionnaires used for this study, specifically the Personal Well-being Index (PWI), Depression Anxiety Stress Scale-21 (DASS-21), Brief Resilience Scale, and the Post COVID-19 Functional Status. An alpha value of .70 or higher signifies that the instruments used are reliable. In addition, since this study is pre-experimental, the test-retest correlation will be used to measure a group of respondents at one time.

The researcher declares that there is no conflict of interest. Procedures followed the standards of the CIU-TTMF, the IATF, and the DOH, to ensure that ethics remained a priority for the entire study duration. No participants have a direct relationship with the researcher that may represent a

conflict of interest, such as a reporting relationship, contract, or any relationship that may impart bias to the research study.

Researcher's Role

The researcher has been in the government service for five years and is tasked as the IFMU Leader for the COVID-19 Task Force. Being a Degree holder of a Bachelor of Science in Nursing and Mastered in Nursing specializing in Psychiatric Nursing, the researcher has been trained in the skills necessary to carry out the designed study. Specifically, the researcher is trained to deal with infected clients. Since the pandemic, the researcher has taken the lead in handling wellness sessions with clients admitted to the TTMFs. Therefore, it is also important to note that the researcher wore full gear Personal Protective Equipment (PPE) throughout the data gathering procedure with strict adherence to the IATF and DOH protocols on infection, prevention, and control. The provision of a donning and doffing area is available for the researcher. The Participants likewise observed physical distancing, with only a maximum of twenty (20) participants per session.

RESULTS AND DISCUSSION

The researcher conducted this study on 182 participants with confirmed COVID-19 infection who were admitted to the Temporary Treatment and Monitoring Facilities in the City of Cagayan de Oro: City Isolation Unit (C.I.U.) 5, C.I.U. 25 and C.I.U. 28.

Of the 182 participants, the majority were males (57%) and belonged to the 26 to 35 years old age bracket and were married 42% of the total population are Roman Catholic (64%), college graduates (47%), employed (63%) and belong to the admission category of local case (69%).

With an overall mean of 2.91, the majority of the study participants showed that they are moderately resilient in dealing with life's adversities. Despite having negligible functional limitations (overall mean = 1.80) and still having persistent symptoms and pain, depression, or anxiety brought by the illness, the majority of them can still perform all their usual activities of daily living. In terms of personal well-being, all participants were moderately satisfied and had an overall mean of 3.78, based on the nine domains of the individual on the general satisfaction, standard of living, health, achievements in life, personal relationships, personal safety, community connectedness, future security and spirituality or religion. The majority of the participants are not experiencing depression, although the overall mean is 1.71, which signifies that some have mild depression. Most of the participants are also experiencing moderate anxiety (3.35) and stress (3.14) and felt close to panic and found it difficult to relax. According to Garmezy (1991), for an individual to be resilient, one must demonstrate "functional adequacy," or the ability to maintain a competent level of functioning despite an interfering emotion.

Based on the results discussed in the previous chapter, the null hypothesis stating that "there is no significant difference in the pretest and post-test scores in resiliency, recovery, and mental health before and after the laughter yoga therapy" is rejected. It showed that Laughter Yoga Therapy affected the resiliency, recovery, and mental health of the COVID-19 infected clients, with the results showing a statistically significant gain of resiliency ($t=29.98$, $p=0.000$), recovery ($t=-4.20$, $p=0.000$) and mental health ($t=9.57$, $p=0.000$) which reveals that the p-value is < 0.05 with the degree of freedom of 338, 326 and 300. Over the years, the nervous system has been better understood. Spencer (1911) supported Shaftesbury's Relief Theory of Laughter (1709), stating that laughter sends out animal spirits that hold pressure inside the nerves. Explained that our negative emotions take a physical form known as nervous energy, and laughter helps release that nervous energy.

The null hypothesis stating that "there is no significant relationship between the mental health and, socio-demographic profile, laughter yoga therapy, resiliency, and recovery" is also rejected. Findings show that clients' mental health is considerably affected by age, educational attainment, employment, laughter, yoga therapy, resiliency, and recovery. A p-value of 0.011, 0.046, and 0.007, respectively, were determined, lower than the alpha level set at 0.05, which means that there was indeed a significant relationship among the said variables. The laughter yoga therapy (pretest), resiliency, and recovery showed a p-value of 0.011, 0.003, and 0.000, both also lower than the alpha level set at 0.05.

Further, the null hypothesis stating that "there is no variable that best predicts mental health of the COVID-19 infected clients" is also rejected, as identified that the (3) best predictors of mental health of the COVID-19 infected clients are recovery, age, and resiliency. Recovery has the highest degree of influence with its beta weight of 0.254, which inferred that recovery is the best predictor of the Mental Health of COVID-19 Infected Clients. Age and resiliency are better predictors, respectively, with their 0.243 and 0.205 beta weights. The value of 0.207 indicates 21% differences in the mental health of COVID-19 infected clients due to recovery, age, and resiliency. The Recovery Model of Mental Health (Jacob, 2015) emphasizes that multiple factors influence the recovery journey of individuals, and despite not having definite control over their symptoms, they can still have control over their own lives.

A focus group discussion was conducted at CIU-TTMF 5 and 28 ($n=20$) to understand the client's experience in the TTMF and the impact of the Laughter Yoga Therapy on them. The discussion revealed that before admission to the Temporary Treatment and Monitoring Facilities, 70% of the participants came from the regular City Isolation Units, while 30% were from their company's isolation area, 25% were extracted from their homes, and 5% were step-down from hospital care. It also revealed that 75% of the participants experienced feelings of sadness after their RT PCR result came back (+) of COVID-19, and 80% of the participants narrated feeling

anxious and nervous when they found out that they would be transferred to the TTMF, 15% were afraid, and 5% of the participants were relieved. Despite this, 75% of the participants also felt happy and grateful. They further narrated that keeping in touch with loved ones through technology helped them cope with stress, sadness, and loneliness. After having undergone the Laughter Yoga Therapy twice for 14-days while being admitted to the TTMF, all participants noticed a change in their breathing pattern, muscle relaxation, and mood, and the majority (85%) expressed feeling happy after the therapy. It is essential to note that participants verbalized looking forward to their recovery and being discharged from the facility. Some also feared the stigma and discrimination. Most of them are afraid of not being accepted back into the community since they are tagged as a COVID-19 'infected' individual.

CONCLUSIONS

This study implies that amid the COVID-19 pandemic, when most are asked to stay at home, the COVID-19 Inter-Agency Task Force for the Management of Emerging Infectious Diseases has a guideline for working individuals whose nature of work does not allow them to stay at home. Therefore, it permits them to go physically to their area of work. This situation mainly happened in the first quarter of 2021, when quarantine restrictions were lifted. The L.G.U.s was preparing to embrace the new normal. Working individuals are more at risk of getting exposed to the virus. They are more likely to spread the virus to others, as are individuals whose work requires constant face-to-face interaction with others or who need public transportation.

The global pandemic has not only caused challenges to physical health but as well as a mental health crisis. Individuals who are infected with the COVID-19 have experienced psychological and emotional struggles. Confirmed COVID-19 positive individuals are placed in a quarantine facility, which has caused distress to clients before they truly embrace the treatment and recovery process. Moderately resilient individuals, although at times, may experience anxiety and stress, especially during this crisis. They are more likely to experience satisfaction in life, are less likely to experience depression, and have a better probability of recovery and being integrated back into the community with negligible functional limitations. Individuals infected with the COVID-19 go through a debilitating process of recovering from the infection. They wander through the uncertainties of their condition, the welfare of their family, and the community's view of them. It is the ultimate role of all City Isolation Units-Temporary Treatment and Monitoring Facilities to provide holistic care to these clients by ensuring that the client's well-being is given utmost priority through the delivery of wellness activities in the area. Watson (1997) stated that human beings could not be isolated from self, others, and the larger population; in her Theory of Human Caring, she described client care as a holistic treatment that involves genuine interpersonal interaction between a caregiver and a client.

Laughter Yoga Therapy, encouraging clients to laugh through the body and not through the mind and experience childlike playfulness, has affected the recovery, resiliency, and mental health of COVID-19 infected clients currently admitted to the TTMF. Although SARS-CoV-2 affects the body's physiological and physical aspects, the client's behavior and perception of recovery play a vital role. They were engaging in wellness-related activities, like laughter yoga. It helped decreased stress for an individual, promotes better breathing and muscle relaxation, and enhances positive hormones. Allowing the clients to focus on the moment and their ability to laugh for no reason could help them recover from the symptoms of the disease and promote a positive mindset toward recovery. Clients under extreme stress and even experiencing depression and anxiety can benefit more from the wellness program engagement even after the quarantine experience. This case implies that an optimistic attitude towards recovery should continue regardless of the place and time, as recovery is a continuous process of reintegrating into society as a functional and valuable community member. Further, the client's mental health is considerably affected by age, educational attainment, employment, laughter, yoga therapy, resiliency, and recovery. Individuals who are advanced in age and have a higher educational background are more likely to understand the situation better. Filter the correct information, and handle the crisis with better discernment. Similarly, individuals who are employed have fewer chances of feeling stress. They have less probability of worrying about their family's welfare and security and their own while they are in quarantine.

Lastly, age, resiliency, and recovery are the best predictors of mental health. Like the participants in this study, young adults are believed to have a higher capacity to build resilience, cope better with life's stressors, and adjust to situations than those who belong to the younger or older age groups. In addition, COVID-19 mortality is higher among the aging population. The person's ability to bounce back from life's challenges dramatically affects the individual's ability to recover from illness and adversities.

RECOMMENDATIONS

With its governing clusters, the Local IATF or the Emergency Operations Center may develop a strategy to enhance the protection of the labor workforce.

The Patient's Management and Monitoring Team, alongside the Isolation Facility Management Unit, may collaborate with the Psychosocial Division of the City Social Welfare and Development Office. Innovate and provide holistic services to the clients to enhance the client's wellness and well-being and partner with other Civic Society Organizations (C.S.O.) and interfaith groups to strengthen the clients' support system while in quarantine.

Expand and involve volunteers in the wellness activities and the services of the Mental Helpline. To provide the counseling needs of the clients, in particular, strengthening the check-in system provided in the CIUs-TTMFs. Incorporate the Laughter Yoga Therapy as a weekly activity for the clients to promote wellness and help provide additional techniques to help clients maintain stable mental well-being. Techniques learned in therapy can also be applied in the everyday setting of one's life.

Together with the Risk Communication Cluster of the Local Government Unit, the City Health Office may work closely to provide the correct information to the public. Lessen the stigma and discrimination through the enhancement of I.E.C. materials. Cascading it down to the community or barangay levels is strongly suggested.

Future researchers are encouraged to conduct related studies as this would help give light to non-pharmaceutical and non-invasive measures to treat illness and promote the importance of mental health and well-being, for mental health is as vital as physical health.

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