The Effects of Craniosacral and Massage Therapies on Quality of Life in Schizophrenia: A Pilot Study

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Abstract

Based on research in schizophrenia treatment, craniosacral therapy, and massage therapy, this study explores the effects of combining craniosacral therapy and massage therapy in treating schizophrenia. This is a randomized, single-blinded experiment which includes a craniosacral-massage treatment group treated by registered massage therapists and a light-touch massage group done by volunteers with no training in either craniosacral or massage therapy. The outcome is measured by comparing the results of a quantified, self-report questionnaire before and after treatments, regarding schizophrenia patients’ perception of their quality of life. This study aims to explore new treatment options for schizophrenia patients and inspires further investigation into the use of physical medicine in schizophrenia treatments. Although age, objective data, support system of the subjects, and cultural background are factors affecting the outcomes of schizophrenia treatment, they are not the variables of this study. Building on the results of this study, more future studies are desired to further investigate age, objective data, support system of the subjects, and cultural background with regard to craniosacral and massage treatment on schizophrenia.

Keywords: schizophrenia, craniosacral therapy, massage therapy, quality of life
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Introduction

In 1993, an estimated one percent of Americans suffer from schizophrenia\(^1\). Schizophrenia is a long term, debilitating mental illness characterized by hallucinations, delusions, cognitive disorders, and other related physical, social and psychological dysfunctions. This illness does not merely affect this one percent of population; it also has a great impact on their families, friends, people around them, and the society at large. Current treatments aim to control symptoms, sustain remission periods and improve the quality of life are antipsychotic medications and psychosocial treatments. More treatments are also being explored at the present.

This study explores new treatment modalities with craniosacral and massage therapies in hope of further improving the quality of life among schizophrenia patients. Craniosacral therapy is believed to have clinical significance on the health of central nervous system (CNS) (Whedon and Glassey, 2009)\(^2\) and more studies of its application on treating illnesses related to the CNS are under way. Massage therapy has been practiced across cultures and times for its relaxation effect\(^3\); hence, it reduces anxiety and promotes a sense of wellbeing. Upon reviewing craniosacral and massage therapies’ potential benefits to schizophrenia patients and their limited adverse effects (as compared with medications), this pilot study aspires to
generate further options of schizophrenia treatments, benefitting the schizophrenia patients and the countless people these patients encounter.

**Literature Review**

Several studies that investigate craniosacral therapy have been documented. In addition, several studies that investigate effects of massage therapy have been published. Several studies that investigate quality of life in schizophrenia patients have also been documented. The literature was reviewed in peer-reviewed research articles in order to learn what has been established in these fields. The search strategy involved searching the PubMed and Google websites. The search strings included craniosacral, massage therapy, quality of life questionnaire, and schizophrenia treatments.

The rhythm of the cerebrospinal fluid (CSF) plays an important role in the health of the CNS. In their article, “Cerebrospinal fluid stasis and its clinical significance,” Whedon and Glassey (2009) hypothesize that the stagnation of CSF has a negative effect on health, specifically the CNS.

Massage therapy promotes wellbeing physically and psychologically. In their article, “Massage - the scientific basis of an ancient art: part 2. physiological and therapeutic effects,” Goats (1994) stated that massage therapy increases cardiovascular and lymphatic circulation, improves connective tissue and muscle health, reduces pain, increases relaxation.

Quality of life is an important indicator in the treatments of schizophrenia. In their article
titled “Psychiatric symptoms and quality of life in schizophrenia: a meta-analysis”, Eack and Newhill (2007) suggested that quality of life (QoL), which includes general wellbeing, subjective QoL, objective QoL, and health-related QoL, has become a crucial pointer aside from the reduction or control of psychiatric symptoms.

**Methods**

**Design**

This single-blinded, randomized study will be conducted at the International Academy of Massage. In the treatment group, Ten registered massage therapist (R.M.T.s) with training in craniosacral therapy will give one hour of combined craniosacral therapy and relaxation massage to the subjects once a week in the same treatment room at the same time for ten weeks. In the controlled group, ten volunteers with training only on draping and client safety will give one hour of light touch massage to the subjects once a week in the same treatment room as the treatment group at the same time as the treatment group as well for ten weeks. R.M.T.s and volunteer therapists massage rotate on subjects within their own group every week.

**Subjects/population sampling**

Twenty subjects, between ages of 30 and 40, with schizophrenia are recruited through Schizophrenia Society of Ontario, Ottawa Chapter. Patients with co-morbidities, substance abuse, and patients whose condition is not stable are excluded from this study.


Instrumentation

Self-reported, QoL questionnaire, twenty clipboards, twenty pens are used before the ten-week study and after (Appendix A). Besides twenty sets of sheets and towels used in the treatment each week, twenty massage tables, stools, Holy massage oil, a relaxing music CD, and a CD player are used in the duration of the ten-week treatments. The pre- and post-treatment questionnaires and treatments are conducted in the same two treatment rooms at the International Academy of Massage.

Procedures

Study procedures, confidentiality, and possible risks are explained to the subjects. Preceding the study, written informed consent (Appendix C) must be obtained. Then, the twenty subjects are randomly divided into the treatment group and the control group. Prior to the ten-week treatment, subjects gather in the treatment room later on used for the massage at the time for each week’s massage. The subjects answer the questionnaire. Then they come back for their once-a-week massage for ten weeks. After their last massage, they answer the same questionnaire again. The questionnaires are then collected and analyzed.

Data Collection and Analysis

Questionnaires are analyzed by using Microsoft Excel to determine the significance of changes by comparing the numerical values of pre- and post-treatments questionnaires (Appendix B).
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**Study Purposes and Rationale**

Schizophrenia is considered pathology in the central nervous system; craniosacral therapy is currently used in conditions related to the central nervous system; massage therapy promotes a sense of wellbeing and relaxation. Therefore, this study explores the effects of this potential treatment option on quality of life in schizophrenia.

**Research Question**

What are the effects of combining craniosacral and massage therapies on quality of life in schizophrenia?

**Limitations**

In this study, the effects of combining of craniosacral and massage therapies are exclusively investigated from the subject’s view point. However, some factors are of great importance in schizophrenia treatment, yet not included in the scope of this study: age, subjectivity, support system of the subjects, and cultural background. The subjects in this study are with 30 and 40 years of age, but it is also valuable to investigate younger and older age groups. Data is mainly collected through questionnaire, which is very subjective. No objective data, i.e., hormonal changes, neurotransmitter, and structural changes to the central nervous system, is collected. Although sociocultural factors are not taken into accounts in this study, their effects on schizophrenia should not be overlooked. Support from family members, friends, and the society also plays an important role in the quality of life of a schizophrenic.
patient. In addition, one’s cultural background affects a person at a deeper yet subtle level, which can also contribute to one’s progress in schizophrenia treatment.

**Budget**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>$6,000.00</td>
</tr>
<tr>
<td>Office supplies</td>
<td>$9,000.00</td>
</tr>
<tr>
<td>Salaries</td>
<td>$96,000.00</td>
</tr>
<tr>
<td>Overhead</td>
<td>$168,000.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$278,000.00</strong></td>
</tr>
</tbody>
</table>

**Care of human subjects**

Prior to the study, verbal explanation of the procedures, confidentiality, and possible risks is given to the subjects. Written informed consent is obtained from the subjects. At any time, the subjects can withdraw from the study, refuse to receive any treatment, or not complete the questionnaire. If any life-threatening physical or psychological harm results from this study, and if the subjects’ condition becomes unstable, they will be withdrawn from the study and refer to their primary health care provider.

**Conclusion**

Among various research done in the fields of schizophrenia treatments, the combination of craniosacral therapy and massage therapy in improving the quality of life in schizophrenia patients has not yet been done. This study does not intend to cure, or to replace any current
treatment options; it seeks to further enhance the quality of life among schizophrenia patients and to open a new possibility for treatment advancement.
References


Appendix A: Quality of Life Questionnaire

Read each question and circle a number between 0 and 10. Numbers indicate the degrees from one extreme answer to its opposite.

1. In general, I feel

physically terrible 1 2 3 4 5 6 7 8 9 10 physically well

2. I general, I feel

emotionally terrible 1 2 3 4 5 6 7 8 9 10 emotionally well

3. I feel depressed

not at all 1 2 3 4 5 6 7 8 9 10 extremely

4. I feel happy

not at all 1 2 3 4 5 6 7 8 9 10 extremely

5. When I think of future, I feel

hopeful 1 2 3 4 5 6 7 8 9 10 hopeless

6. My life is

meaningless and meaningless and

purposeless 1 2 3 4 5 6 7 8 9 10 purposeful
7. I feel that I have

no control over my complete control
life  1  2  3  4  5  6  7  8  9  10  over my life

8. I feel good about myself as a person

totally disagree  1  2  3  4  5  6  7  8  9  10  totally agree

totally disagree  1  2  3  4  5  6  7  8  9  10  totally agree
Appendix B: Data Calculations

1. Each questionnaire and each question

   Post-treatment number in each question ÷ Pretreatment number in each question × 100%

   = Percentage of changes pre- and post- treatments

2. Cross group comparison

   Treatment group \((T)\): Percentage of changes pre- and post- treatments in each treatment group subject \((T1, T2, T3, \ldots T10)\)

   \[
   \frac{(T1 + T2 + T3 + T4 + T5 + T6 \ldots + T10) \div 10}{\text{arithmetic mean}}
   \]

   \[
   (T1 \text{ – arithmetic mean})^2 = T1.1
   \]

   \[
   (T2 \text{ – arithmetic mean})^2 = T2.1
   \]

   …

   \[
   (T10 \text{ – arithmetic mean})^2 = T10.1
   \]

   \[
   \sqrt{(T1.1 + T2.1 + \ldots + T10.1) \div 10} = \text{standard deviation}
   \]

   Control group \((C)\): Percentage of changes pre- and post- treatments in each treatment group subject \((C1, C2, C3, \ldots C10)\)

   \[
   \frac{(C1 + C2 + C3 + C4 + C5 + C6 \ldots + C10) \div 10}{\text{arithmetic mean}}
   \]

   \[
   (C1 \text{ – arithmetic mean})^2 = C1.1
   \]

   \[
   (C2 \text{ – arithmetic mean})^2 = C2.1
   \]

   …
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\[(C10 - \text{arithmetic mean})^2 = C10.1\]

\[\sqrt{(C1.1 + C2.1 + \ldots + C10.1)} \div 10 = \text{standard deviation}\]

**Arithmetic mean** indicates the percentage of changes in the pre- and post-questionnaire.

**Standard deviation** shows how far apart each subject’s changes in the pre- and post-questionnaire compared with the rest of the subjects.
Appendix C: Informed Consent

I, _____________________________, have received detailed verbal explanation of the procedures and possible risks of this study directed by Yu Jang-Deng and understood the information given. I am acknowledged that I can withdraw from this study, refuse treatment, or decline the questionnaire at any time. I am also advised that I will be withdrawn from this study and refer to my primary health care provider if my condition becomes unstable, or if any life-threatening physical or psychological harm related to this study occur. All of my personal data in this study will be kept confidential and reviewed among the researcher, research assistants, therapists, and research consultants for the sole purpose of this study.

Participant’s signature

___________________________________________________

Date

___________________________________________________