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TTAP Method Proves Cognitive impact with Psychiatric, Alzheimer's and TBI populations

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What is Therapeutic Thematic Arts Programming?

The TTAP Method® is a structured, multimodal approach (social, emotional, cognitive, psychological and sensory stimulation) to enhance wellness that uses visual imagery as a catalyst for enhancing social interactions and provides cognitive stimulation for individuals of all ages, abilities, and intelligences.

It has been proven to enhance cognitive functioning and increase socialization in Children, Young Adults, Cognitively Impaired, MCI, A.D., TBI
TTAP Method for Older Adults-2007

Structures Self Expressive Through Activities

- Meditation
- Music
- Painting
- Sculpture
- movement
- Words
- Theme events
- Phototherapy

Life Themes
Transcending Dementia Through the TTAP Method, 2012

Step 1: Conversation

Step 2: Meditation

Step 3: Painting, Drawing, 2 Dimension work

Step 4: Sculpture, 3 Dimensional work

Step 5: Movement, Dance, Exercise

Step 6: Poetry, Writing, Storytelling

Step 7: Food, and Cooking

Step 8: Theme Event

Step 9: Phototherapy, and use of photographs

Step 10: Sensory Stimulation

Step 11: Drama, Theater

Step 12: Evaluation, responses and research
Why the TTAP Method®?

- The TTAP Method® is a structured, replicable 12-Step approach that uses all the creative arts as a catalyst for CHANGE.

- Increase in Cognitive, and Behavioral outcomes

- Physical engagements

- Social engagements

- Emotional engagements

- Spiritual engagements
Mask Making-
Steps 1, 2, 3, 4 & 6

- Temporal-parietal region has been shown to be activated when individual is focusing on “self” and “self reflection” (Saxe et al., 2006)
Meditation, Music and Memory Box
Steps 1, 2, 3, 4 & 6

- Occipital Lobe stimulated through retrieval of autobiographical thoughts such as a significant life memory (Spreng, R., Mar, R., & Kims, S., 2009)
Your Thematic Experience

- CLOSE YOUR EYES.......
- Relax your mind and body
Why are memories therapeutic?

• Memory: the mind stores and remembers information, you are exercising your brain

• Reminiscence: a collection of incidents or experiences that someone remembers. The brain “thinks” it is really happening again when recalled and feels all the benefits!
Activities affect the brain through language usage, emotions and learning.
Cognitive Reserve an effect the individuals diagnosed with Alzheimer's Disease, Dr. Yacov Stern

Cognitive Reserve

• **A:** Memory-recall ability can increase

• **B:** *Speed* of Processing information can be enhanced

• **C:** Executive functioning category identification word usage

TTAP stimulates all functioning
Dear Lommie (Hargreave),

I'm sorry that I didn't get to talk to you yesterday. I've been busy with different projects that I have to do. I think the best way to communicate with you every day is to text you messages and let you know how things are going for you.

Love,
Mom
TTAP Method and Collective Impact

Personal Themes are shared among patients and staff

24 hour Engagement from ALL staff

Stimulates conversation & interactions

Increases social, emotional, cognitive and physical activity
Supports Interdisciplinary Approach to Care by Stimulating Interaction; “Emotive Therapy”

Step 1: Conversation

Step 2: Meditation

Step 3: Drawing

Step 4: Sculpture 3 dimensional

Step 5: Music, Movement Dance

Nursing, Aides, and CNAs can interact to the music.

Social Workers, and other Therapists can use theme for better communication.

Maintenance, housekeeping dietary staff can stimulate effective communication.

Doctor’s and psychologists can grasp a deeper understanding of the patient.
TTAP on the Linden Oaks Hospital GeroPsych Unit (2012)

Improving patient care and decreasing costs
70 Members of the Treatment Team Educated in utilization of themes throughout the year (ASA, 2013)

- Staffed by interdisciplinary team including RN, Behavioral Health Therapists, Neurologists, Dieticians, MD’s, Art Therapy, Music therapy & Rec. Therapy
- Level of function ranges from high functioning patients with depression to low functioning patients with severe dementia
Measurable Patient Outcomes;

- Falls was a high priority and the Hospital was sited by the State.
- Aggressive Behaviors was a dominant issue and directly effected staff turnover rates, staff lack of involvement and overall staff discontent.
Decrease in Falls on Unit over the course of 12 months:
5 falls monthly to 3 Falls Monthly
Decrease in Aggressive Behaviors saves 160,000.00 in direct healthcare costs!
TTAP on the Linden Oaks Hospital Gero-Psych Unit
Improving communication and staff engagement, 2015-2016
1850 interactions, Variables Analyzed:

MOOD: Observed pre-post intervention
* changes per decade of age
* correlated to largest changes in the Baby Boomer age group.

TIME: Measured interactions
* Time actually engaged was correlated to age. Oldest and baby boomers engaged longest.
* Engagement
# Nursing TTAP Assessment Tool (Gero/Generations)

## Variables:

1. **Staff date/Shift**
2. **Patient Identification**
   - REMOVED-HIPPA
3. **Patient MOOD**
   - PRE - INTERVENTION
   - POST - INTERVENTION
4. **Length of Time in Engagement**

<table>
<thead>
<tr>
<th>STAFF NAME</th>
<th>Patient identification number</th>
<th>THEME of engagement: LOVE FAMILY FRIENDS CHILDREN SELF HOLIDAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE:</td>
<td>Shift:</td>
<td></td>
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</tbody>
</table>

| TIME: _______ Minutes | Length of Engagement in minutes (ex. 5 min) | Rate the mood pattern 12345 Mood rating before interaction:
<table>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>___ Flat:0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>___ Negative:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>___ Positive:2</td>
</tr>
</tbody>
</table>
|                       |                                             | Mood rating after interaction:
|                       |                                             | ___ Flat:0                                                |
|                       |                                             | ___ Negative:1                                             |
|                       |                                             | ___ Positive:2                                             |

<table>
<thead>
<tr>
<th>THEME Conversation and Engagement:</th>
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<tbody>
<tr>
<td>Engagement rating before interaction:</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Engagement rating after interaction:</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
QUANTITATIVE Statistical Analysis

MOOD RATING (pre/post)

- Very Positive # 2
- Slightly Positive # 1
- Neutral 0
- Very Negative # -1
- Slightly Negative # -2
Average Mood Change per Decade

Based on 1,850 resident interactions
Linden Oaks Behavioral Health Center during 2013-2014

Correlation Between Decade and Average Mood Change: -0.66326
Statistical Analysis

ENGAGEMENT
(Conversation with nurse/CNA)

- Very Positive #2
- Slightly Positive #1
- Neutral #0
- Very Negative #-1
- Slightly Negative #-2
Research Results from Linden Oaks at Edward Hospital, 2013-14

- Staff was educated over a 2 day, 14 hour period on brain neuroscience,
- 1850 residents were followed over a 12 month period.
- Staff created themes for each month and 4 sub-themes for each week of the year.
FINDINGS: Strong correlations at -0.66326 in relation to change in mood by age (n=1850)

- AGE Those born in 1929-1940 or 85 to 74

*GREATEST MOOD CHANGES AGE
75 to 50 (Baby Boomer’s)
Average Conversation Change per Decade

Based on 1,850 resident interactions
Linden Oaks Behavioral Health Center during 2013-2014

Correlation Between Decade and Average Conv. Change  -0.25213
FINDINGS IN RELATION TO TIME IN ENGAGEMENT BY AGE

♦ LESS TIME ENGAGED
  AGE 1929-1940 or 85 to 74

♦ AGE 1950’S- 1960’S
  Most time engaged-50’S to 70’S (Baby Boomer’s)
Average Length of Engagement per Decade

Based on 1,850 resident interactions
Linden Oaks Behavioral Health Center during 2013-2014

Series 1

<table>
<thead>
<tr>
<th>DECADE OF BIRTH</th>
<th>MINUTES</th>
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<tr>
<td>1910</td>
<td>10.19444</td>
</tr>
<tr>
<td>1920</td>
<td>8.888158</td>
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<tr>
<td>1930</td>
<td>8.140893</td>
</tr>
<tr>
<td>1940</td>
<td>7.945274</td>
</tr>
<tr>
<td>1950</td>
<td>8.662162</td>
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<tr>
<td>1960</td>
<td>9.320313</td>
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</table>

Correlation Between Decade and Length of Engagement  -0.340617845
Staff Outcomes

- Employee engagement prior to TTAP implementation

<table>
<thead>
<tr>
<th></th>
<th>Pre TTAP</th>
<th>Post TTAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaged</td>
<td>20%</td>
<td>50%</td>
</tr>
<tr>
<td>Content</td>
<td>38.9%</td>
<td>40%</td>
</tr>
<tr>
<td>Ambivalent</td>
<td>28%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Disengaged</td>
<td>12%</td>
<td>0%</td>
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</table>
TTAP HAS COLLABORATIVE IMPACT

EMOTIVE THERAPY®

Collaborative Impact on entire unit

TTAP

- Personal Theme
- ME
- I
- We

Nursing
  - Identify theme
  - Share

Therapists
  - Identify theme
  - Engage

Social workers, Dietician
  - Identify theme
  - Enhanced interactions
Students Research Theme Interactions
Dowling Gardens, 2016-2017

10 sessions, 9 participants
10 sessions, 10 participants
Introduction
Guided imagery meditation guides a person on a visual journey in their own mind to help them relax.

Guided imagery has been found to help reduce depression, anxiety, pain, stress and overall well being (1,3,4,5,6). It has also helped to reduce cravings, improve physical activity level or performance, coping, and problem solving (2).

Guided imagery is an effective Therapeutic Recreation modality that can be used with patients who have experienced a brain injury, spinal cord injury, stroke, amputation, and other neurological, cardiac, and orthopedic conditions to help reduce their depression, anxiety, pain and stress.

Methods
This study was done at a local rehabilitation hospital. A guided imagery meditation program is conducted Monday to Friday for 15 minutes. Self-selected patients with many different diagnoses (primarily stroke, orthopedic, amputees & spinal cord injuries) attend the group by personal choice.

From this cohort, random attendees were chosen to participate in a data collection measuring their depression, anxiety, pain and stress (DAPS). The DAPS questionnaire is a four item 1-10 likert scale, 10 is the worst, most extreme level and 1 being the lowest report of self-perceived depression, anxiety, pain or stress. The patients chosen to complete the DAPS were given a pretest before the meditation and a post-test immediately following the meditation. Data was collected from 105 patients over two years.

Patients who attended the meditation group were asked to complete the DAPS one time. The rationale for this decision is patient schedules and medical needs change daily and they are unable to reliably attend. Thus it is very challenging to conduct any longitudinal analysis.

Results
The results of this study showed that guided imagery meditation significantly decreased depression, anxiety, pain and stress for patients in a hospital setting.

The results also show that meditation can be used as a very beneficial non-pharmacological modality to treat physiological and emotional symptoms in hospitalized patients.

Conclusions

References
TTAP Method at Helen Hayes Rehabilitation Hospital, 2018

- IRB approved study looked at 7 patients with TBI as a qualitative management study
Comprehensive Neurorehabilitation (CN) Programs

• CN programs have been developed to improve psychosocial functioning with an emphasis on developing the patient’s ability to be as active and engaged in meaningful activities as possible (Kline, 2016)

• CN is a holistic treatment program supported by clinical evidence, which includes a highly intensive, task-specific, repetitive neurorehabilitation treatment regime that are MEANINGFUL.
Warwick-Edinburgh Mental Well-being scale

• Developed to enable the monitoring of mental wellbeing in the general population or for selected groups
• It is most often used as a global score for a population or group to show how it may change over time
• However, according to the developers of this scale, it can also be used to determine if overall well-being improved in an individual client
• A three point change is considered to be significant in an individual.
14 questions

• The 14 question Warwick-Edinburg Mental Psychological Well-Being Scale (WEMWBS) consists of a series of statements reflecting six areas of psychological well-being: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance.

• Question 12 - I’ve been feeling loved (P=.047)
• Question 13  I’ve been interested in new things (P=.047)

  a statistically significant trend was noted and would be further explored in larger sample.
Warwick-Edinburgh Mental Well-being scale
autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance

*P>0.047

<table>
<thead>
<tr>
<th>Client</th>
<th>Gender</th>
<th>Age</th>
<th>Initial Warwick-Edinburgh Mental Well-being Score</th>
<th>Follow-up Warwick-Edinburgh Mental Well-being Score</th>
<th>Net change Warwick-Edinburgh Mental Well-being Score</th>
<th>Significant improvemen noted by Warwick</th>
<th>Participant reported the sessions as a positive experience</th>
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<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>55</td>
<td>34</td>
<td>51</td>
<td>+17</td>
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<tr>
<td>2</td>
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<td>53</td>
<td>+4</td>
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<tr>
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<td>39</td>
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<td>+19</td>
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<tr>
<td>Average</td>
<td></td>
<td></td>
<td>42.8</td>
<td>49.6</td>
<td>55.2</td>
<td>5/7 improved</td>
<td>100% improved</td>
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</table>

Participant reported the sessions as a positive experience.
## Gender, age and participation

<table>
<thead>
<tr>
<th>Client</th>
<th>Gender</th>
<th>Age</th>
<th>Number of Sessions Attended</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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<td>55</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
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<td>65</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>40</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>40</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>34</td>
<td>8</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>42.8</td>
<td></td>
</tr>
</tbody>
</table>
Themes of vacations enhances cognition, coping and directly effects anxiety and depression in Patients with TBI.

Expressive vacation themes changes lines and color into meaningful topics of conversation
TTAP Method utilized in Quality Management Study
Traumatic Brain Injury Day Program (7)
Summary of results

1. There was an overall improvement in well-being scores of the 7 participants
2. Statistical significance in the self-reported positive overall experience
3. Statistically significant overall responses supports the inclusion of the TTAP Method into the comprehensive neuro rehabilitation programming
4. A larger study with greater number of participants will be conducted in 2019 to enhance statistical significance
Meditation and expressive arts has significant possibilities for change in Healthcare

• Quality of life changes through self expression and social engagement
• Personal Power is increased in the face of trauma
• Enhanced programming and interactions from all staff and Healthcare professionals
• Time in programming increases
• Person centered approach to activities and engagement
• Staff engagement increases naturally
Most importantly significant change in our future healthcare

- Quality of life changes through social engagement
- Enhanced programming and interactions from all professionals
- Time in programming increases
- Person centered approach to activities and engagement
- Staff engagement increases naturally