

Linda Levine-Madori, PhD: St. Thomas Aquinas College

TTAP Method:
A Multimodal Approach Created to Enhance Cognition and Psychosocial Wellbeing in Individuals
Diagnosed with Moderate Alzheimer's Disease.

Abstract

Currently, there is a need for strength-based recreation therapy approaches which promote the retention of skills and abilities of those diagnosed with Alzheimer's disease. This qualitative study collected data on verbal responses to Therapeutic Thematic Arts Programming for Older Adults (TTAP Method©). TTAP Method© (Levine-Madori, 2007) provides stimulation to three distinct brain systems while incorporating person centered programming in order to encourage brain wellness and neural regeneration. The TTAP Method© has shown promise in previous studies to enhance cognitive performance. However, in this study, through the evaluation of the verbal responses, participants were given the opportunity to "have a voice" as well as give insight into their experiences during a structured approach focused on skill retention. Participant enjoyment of activities is an indication of future involvement and commitment to engagement during programming. For this reason, this study contributes valuable qualitative data to accumulating quantitative data.

Overview

Multimodal interventions (a variety of mixed interventions, stimulating all regions of the brain) have proven to be extremely successful in early stages of Alzheimer's disease (AD) for decreasing symptoms (Rentz, 2002; Chertkow, Verret & Bergmen, 2001). Such interventions are designed to provide a wide variety of stimuli, positively affecting and increasing neuronal activity, responses, and plasticity (Chertkow et al., 2001; Burgener, Gilbert & Mathy, 2007). Research has shown that individuals suffering from Alzheimer's disease have a strong need "to be heard" and to "have a voice." (Doody, Stevens, Beck, Dubinsky, Kaye, and Gwyther, 2001). Research describing the self-identified needs of the individual with AD is becoming a growing priority (Cotrell, & Schultzy, 1993). Studies that focus on personhood and the importance of retaining feelings of self-respect, enjoyment of activities have been found to contribute significantly to the understanding of which programs prove to be effective (Claire, Wilson, Carter, Roth & Hodges, 2004).

While addressing the lack of researching client perspectives during treatment, Zarit and colleagues (Zarit, Femia, Watson, Rice-Oeschger, Kakas, 2004) proposed that the person with AD has specific needs which include; exploration of feelings of loss, grief and sadness as well as love, hope and fortitude. Most significantly the theme of "maintaining or retaining feelings connected to one's self and to the larger community of peers, friends and family" is relevant when working with the Alzheimer's population (Zarit et al., 2004). In order to understand the experiences of the client and create therapeutic goals relevant to the client's experience, the voice of the client must "be heard" and the therapeutic experience must not only provide stimulation for rehabilitation but also meet the emotional and social needs specific to the individual with AD.

Therapeutic Thematic Arts Programming for Older Adults (TTAP Method©) is a multimodal, art/ recreational therapeutic process that employs interventions within a nine step structure in order to provide systematized activities documented to provide mental health promoting stimulation (Levine-Madori, 2007). In addition to its aim of stimulating multiple aspects of brain functioning, the TTAP Method© addresses social and emotional needs, and integrates opportunities for life review (Levine-Madori, 2007). The TTAP Method© seeks to provide the early intervention needed in order to assist older adults in retaining cognitive and psychosocial abilities (Rentz, 2002; Levine-Madori, 2007; Hass-Cohen, & Carr, 2008; Moniz-Cook, Agar, Gibson, Win & Wing, 1998) while also providing an enjoyable therapeutic experience during which clients can "have a voice" and "be heard." By providing

such opportunities, participant desire to be involved in programming on a regular basis for longer durations may be affected.

Method

Data was collected from a locked Medical Center providing care to individuals suffering from Alzheimer's disease. This study collected subjective, verbal responses to seven different TTAP Method© protocols which aimed to stimulate specific brain regions(see Table 1). The primary aim of the study was to examine four overall questions 1) Did individuals feel the TTAP Method© sessions increased their overall feelings of quality of life? 2) Did the sessions positively affect their personal needs? 3) Did the sessions enhance verbalization? 4) Does the TTAP Method© naturally increase opportunities for cognitive stimulation in programming

The study was qualitative and descriptive in nature. No control group was utilized. Consent forms were administered through legal guardians with IRB approval. Each TTAP Method© sessions was followed with post session questions from the Farrington Leisure Evaluation Scale (adapted for this research study). This format allowed investigation of the hypothesis that those individuals with moderate AD could evaluate and give feedback regarding their likes and dislikes of the multimodal activities.

6 residents diagnosed with moderate levels of Alzheimer's disease met with students for therapeutic activity for seven weeks. TTAP Method© sessions lasted each week for one and a half hours. At the end of each session students utilized a modified version of Farmington's Leisure Evaluation Scale (using 1-5 Lickert Scale) and open ended questions, to attain responses from the participants regarding "their voice" in the overall evaluation of each session.

Results

Participants reported that their emotional and social needs had been met within the session with a mean rating of 4.9 out of 5. Student and staff observations contributed to the qualitative data collected. Students reported observing participants gradually becoming more verbally active with each other. This was demonstrated during the interaction between the residents as each week went by. One student described a participant who for the first three sessions didn't want to do anything (she was present at the sessions but wouldn't participate). This same participant then started wanting to do more and more as the weeks went on. By the last two sessions, staff revealed that this same participant would wait at the elevator to be taken to the session every Wednesday afternoon.

The participants verbalized and were taped as stating they were feeling "more alive each week" and that they felt they had "a purpose in coming to this program." The patients were observed and recorded stating at the beginning of the fourth session that "they felt they were doing mental work", and "this session felt like my brain was being worked -out." Other comments included: "I felt free during this group", "I feel very happy", "I was able to really create something", "I was able to do what I wanted", "Someone saved me a lot of trouble", "I would like to be more active but I am not right now", "I am becoming more active coming to this program", "I am always active."

Implications

By giving clients "a voice" during the sessions and allowing them to "be heard" this research provided insight into the experiences that the participants had during a structured therapeutic approach. Participants described feeling stimulated by the opportunity to make choices. Although the TTAP Method© aims to stimulate the participants directly through the art directives, the participants' emotional reaction to the session plays an essential role in effectiveness of the sessions.

The TTAP Method© is rapidly being incorporated into various research projects in New Zealand, Finland, Australia and the United States due to the fact that it lends itself to systematization while at the same time providing person centered individualized care (Alders, 2009). Therapeutic Thematic Arts Programming – the TTAP Method© incorporates activities that have shown to be

emotionally meaningful while at the same time encouraging socialization and vocalized emotional expression.

image created by Amanda Alders

7 Protocol Total Stimulation: Areas of the brain

Frontal lobes-may mediate composition of space in visual art making.

Temporo-parietal regions-recruited for 'theory of mind' tasks.

Posterior parietal cortex-translates visual information into motor commands.

Prefrontal cortex- thicker in meditating participants- meditation may offset cortical thinning.

Right temporal lobe-active when listening to emotionally significant music.

Orbitofrontal cortex-links food to pleasurable experience.

Reticular formation- controls eating behaviors, and is the among the last regions effected by Alzheimer's disease.

Occipital ventral cortex-provides responsivity to color, objects and faces from visual stimuli.

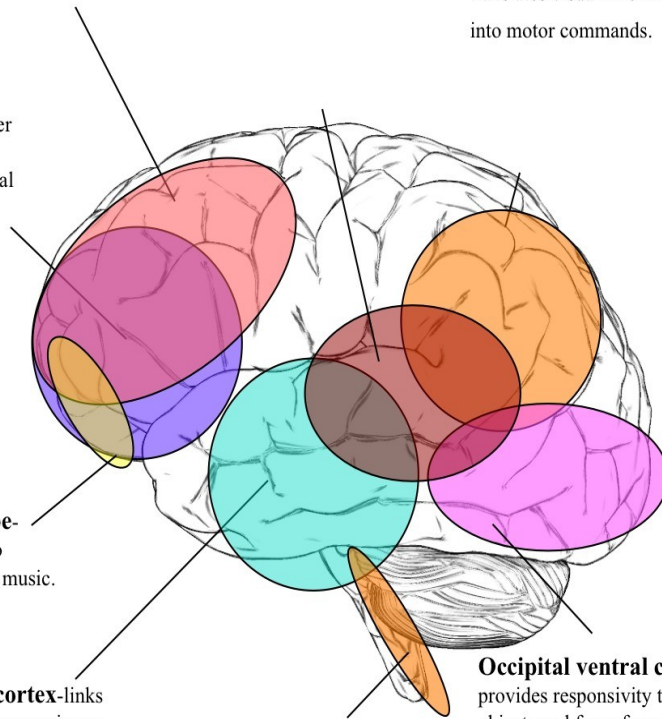


Figure 1. Areas of the Brain Stimulated During Each of the Seven Protocol Sessions

Table 1.
Protocol Directive, Qualitative Data and Brain Regions

Protocol Directive(s)	Step(s)	Positive Participant Commentary	Brain Regions
Meditation	1,2	I felt free during this group	Prefrontal lobe
Oil pastel drawing	1,2,3	I feel very happy	Frontal lobe
Wreath sculpture	1,2,4	I was able to really create something	Parietal cortex
Mask Making	1,2,4	I was able to do what I wanted	Temporo-parietal region
Memory Box	1,2,4	Someone saved me a lot of trouble	Motor cortex
Painting	1,2,3	I am...more active [in] this program	Occipital lobe
Food event	1,2,7	I am always active	Orbitofrontal cortex

*Note: all protocols included music, meditation, and conversation. For this reason, steps one and two are listed for all of the protocols. The indicated brain region pertains only to the specific directive listed in the first column.

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