Music for All Seasons

MUSIC AND QUALITY OF LIFE AMONG NURSING HOME RESIDENTS WITH DEMENTIA

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Dementia is an enormous public health issue, affecting 13-15 million Americans and at least half of residents in long-term care facilities have dementia. Quality of life issues for this population are varied but uniformly include the non-cognitive issues of apathy, depression, agitation, sleep difficulties, loss of autonomy and social isolation. It has been said that "patients with Alzheimer's disease do not die *of* the disease, they die *with* it from some other cause" (Boller and Duyckaerts, 1997). Across the spectrum of dementing illnesses from vascular dementia to Parkinson's and Alzheimer's diseases, depression is both a manifestation of the dementing process (Cummings, 1992) and the consequence of social isolation. In the view of some investigators, depression itself may be responsible for the precipitous declines in clinical course (Absher and Cummings, 1993).

The consequences of agitation and sleep difficulties may also be dramatic. The need for sedating medications during the daytime leads to poorer social interaction and exacerbates a reversal of the sleep-wake cycle. Demented patients, already inclined to increasing disorientation after nightfall, will be more alert and agitated following a day during which sedatives have been used. This, in turn, leads to a greater use of hypnotics at bedtime, contributing to the steady decline into the vegetative stage of many dementias.

The medical benefits of music

The use of music in dementia has extended into multiple areas involving both the cognitive and non-cognitive aspects of the condition. Gotell et al (2002) have identified increased verbal comprehension among demented patients exposed to singing. Gregory (2002) induced higher measures of attentional ability in adults with cognitive impairments following weekly music sessions. Clark et al (1998) saw reductions in 12 or 15 identified aggressive behaviors in a long-term care population with dementia during and following exposure to music. Music has also been documented to reduce agitation among elderly (Remington, 2002) and demented (Ragneskog et al, 2001) residents of long-term care facilities.

Music for All Seasons

Music For All Seasons (MFAS) is a not-for-profit organization that brings, live, interactive music performances to audiences in long-term care facilities, medical centers and other facilities. The organization operates on the principle that music serves a healing purpose as well as improving cultural awareness and social connectedness.

Brian Dallow *is the co-founder and Executive Director of Music For All Seasons, which he and his wife, Artistic Director Rena Fruchter, created in 1991. Mr. Dallow studied at the Royal College of Music, the Royal Academy of Music, the London School of Economics, Brandeis University, and Rutgers University. He holds degrees in performance, composition and theory, and musicology. In addition to Music For All Seasons, Mr. Dallow is a composer and pianist and is the co-founder of two orchestras, the New York Virtuosi Chamber Orchestra and the Philharmonic Orchestra of New Jersey.*

The New Jersey Neuroscience Institute at JFK Medical Center is a comprehensive facility designed exclusively for the diagnosis, treatment, and research of complex neurological and neurosurgical disorders in adults and children. Services offered at the Institute include programs in minimally-invasive and reconstructive spine surgery, peripheral nerve surgery, brain tumors, dizziness and balance disorders, epilepsy, sleep, memory problems/dementia, cerebral palsy, stroke, and spasticity and movement disorders. As a department of Seton Hall University's School of Graduate Medical Education, NJNI serves as the clinical setting for SHU's residency training in neurology.

Martin Gizzi*, MD, PhD is Professor and Chairman of Neuroscience at Seton Hall University School of Graduate Medical Education, Chairman of the NJ Neuroscience Institute, and President of the Medical Advisory Board of MFAS. He holds a PhD in experimental psychology, an MD and is a board certified neurologist. He has been a prolific researcher, securing grants from the National Institutes of Health and the National Aeronautics and Space Administration. His research with NASA led to several experiments performed on board the space shuttle.*

Project design and results

For this project, MFAS provided live, interactive music performances at a long-term care facility. 23 patients with diagnoses of dementia were enrolled with appropriate consent. Staff tracked the number of falls, number of times sedating medication was given and quality of life using the Quality of Life in Dementia (QOLID) scale. QOLID was developed in 1988 (Alexopoulos et al, 1988a,b) and has been extensively validated in populations with dementia (Brod et al, 1999; Logsdon et al, 1999 and Ready et al, 2002). The current study used a repeated measures design, testing subjects before and after two live music performances given six weeks apart. Each set of measures was taken at two-week intervals.

The principal result was a measured increase in quality of life as measured by the QOLID. Scores increased significantly following each performance, and maintained this increase for as long as six weeks. The effect was highly significant ($F(5, 105) = 4.12$, $p = .002$). There was a trend for the use of sedating medications to fall in the two-week period following each

performance; however, because the overall use was so low there was not a signficiant effect ($F(5,105) < 1$, $p = .84$). Similarly there was a trend of decline in the number of falls in the two-week period following each performance, but the effect was not significant ($F(5, 105) < 1$, $p = .5$).

The results strongly support the value of live musical performances in facilities that care for patients with dementia and speak directly to the mission of **Music For All Seasons**. The non-significant trends suggest that larger studies would be helpful in documenting decreased risk and decreased medical expenses for patients attending regular musical performances. It is our intent to repeat the study with a larger sample and using a control population rather than a repeated measures design.

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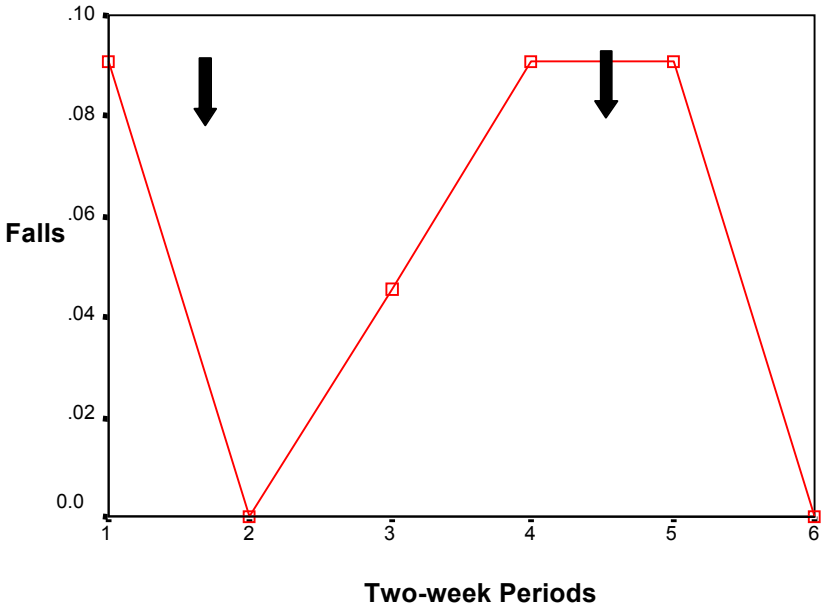
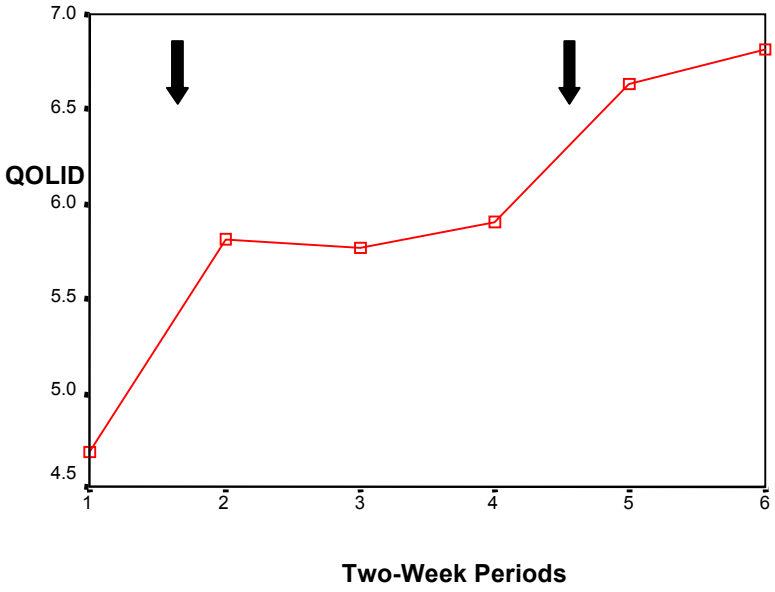
Frequency of falls



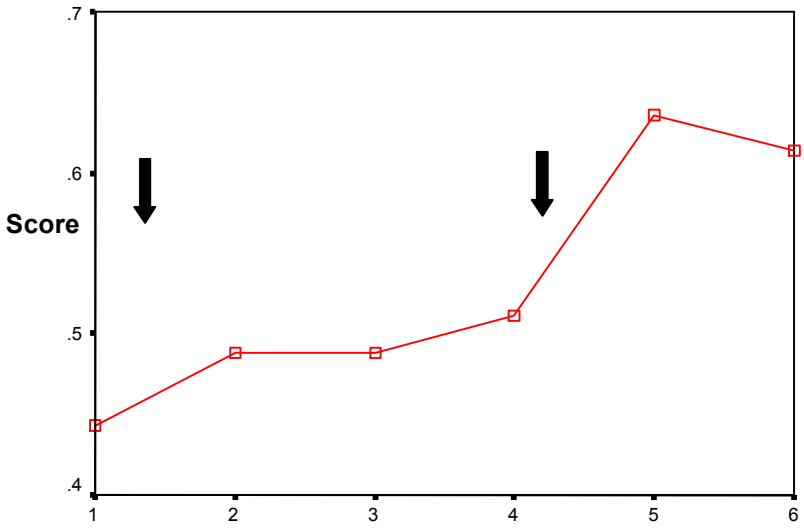
F (5, 105) <1, p = .5

Total QOLID score for all subjects



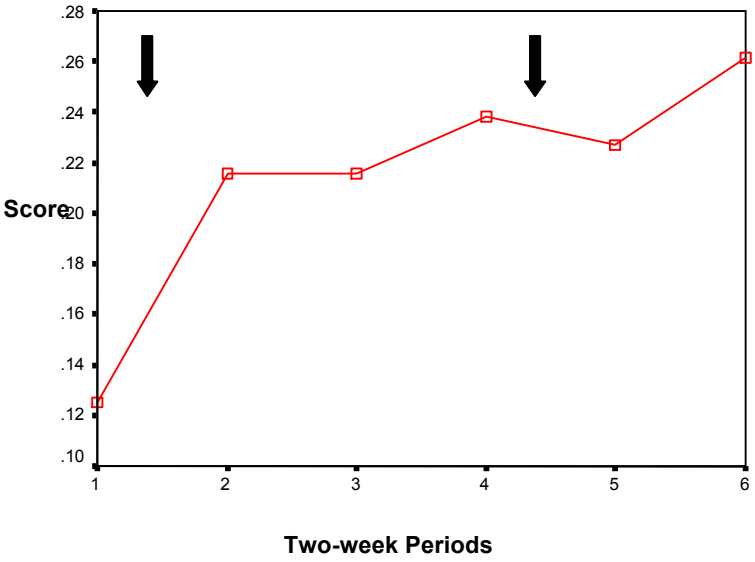
F (5, 105) = 4.12, p = .002

QOLID Mood subscale



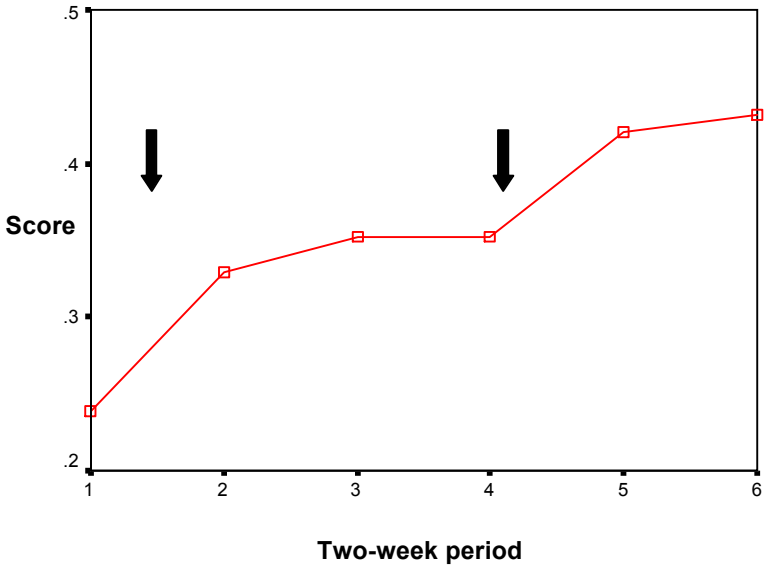
F (5, 105) = 2.2, p = .06

QOLID Behavioral Subscale



F (5, 105) = 2.38, p = .043

QOLID Idea Disorder Subscale



F (5, 105) = 4.7, p = .001