

Assessment of Ability of Nursing Home Residents with Dementia to Imitate and Spontaneously Perform Rhythmic Patterns with Accents and Complex Rhythmic Structure



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Introduction

Dementia is often seen as a tragic mental illness that is difficult for both those afflicted with it and their loved ones. Much research has been done to find solutions to either regain lost reality orientation or to maintain what has remained once dementia has been identified and diagnosed. One promising tool that was successful was to use music, leading to many applications of music therapy. This study was conducted to add to the knowledge base of methods and techniques that have already been developed. The study focused on the ability for patients with dementia to process and perform rhythms that they heard in familiar songs. Multiple styles and meters were chosen in the different songs to provide an accurate picture of what best helps patients with dementia process these rhythms. The methodology of the study was built upon anecdotal observations and a pilot study conducted by Robert Groene entitled "The Effect of Presentation and Accompaniment Styles on Attentional and Responsive Behaviors of Participants with Dementia Diagnoses."

Methodology

Participants were observed over the course of seven weeks every Tuesday and Thursday at 4:00 p.m. Each was offered a tambourine and was observed while previously recorded music was played for them. The same recording was used throughout the study, and it is notable that the songs which were familiar to them were performed by a music therapist who frequently played for them, so the performance style was familiar and had previously been effective with elicitation of them spontaneously performing rhythm patterns. Rhythmic responses were recorded by two independent observers throughout the entire study which was divided into three different observation periods—a training period, a pre-training and a post-training period.

The training period consisted of a facilitator leading designated rhythms consistently throughout each of the songs.

During the pre- and post-training periods the facilitator did not repeatedly model a consistent rhythm pattern for the residents to follow.

Data

Table 1

	2-Feb	4-Feb	9-Feb	11-Feb	16-Feb	18-Feb	23-Feb	25-Feb	2-Mar	4-Mar	9-Mar	11-Mar	16-Mar	18-Mar
Crying in the Chapel	3	7	2	5	7	6	3	9	4	5	6	10	1	3
Blueberry Hill	3	7	2	2	9	5	4	7	4	5	7	9	0	5
The Naughty Lady	4	8	4	5	10	7	6	8	10	9	8	11	4	6
La Bamba	4	3	3	2	4	3	5	5	3	3	6	6	2	3
Hi-Lili, Hi Lo	6	5	6	5	10	6	5	5	5	6	4	9	3	2
Que Sera, Sera	7	4	4	4	6	5	4	4	3	4	n/a	6	1	3
Mack the Knife	5	4	5	3	7	7	5	4	4	6	n/a	8	0	4
Fascination	4	2	6	3	6	5	3	3	4	3	3	5	0	3
Could Have Danced	6	5	6	3	5	3	3	3	3	6	n/a	5	0	3
Battle Hymn Tennessee	9	3	7	7	11	12	7	12	9	9	9	10	4	7
Waltz	2	4	2	2	4	7	2	9	6	4	6	7	1	2
Special Angel	7	8	5	5	7	7	9	7	7	5	4	9	2	4
Earth Angel	9	7	6	7	7	8	5	8	6	7	5	5	0	2
On the Street Where You Live														
Yellow Rose	6	6	5	3	8	6	5	4	5	6	n/a	7	0	7
Great Pretender	4	3	7	3	10	10	5	4	5	6	n/a	8	1	7
76 Trombones	6	5	7	4	5	9	5	2	5	7	n/a	7	1	8
My Prayer	1	8	5	3	6	4	3	5	4	7	n/a	4	2	2

Above is the chart of total rhythmic responses for every song on each specific day. The chart below shows the number of different rhythms performed for each song throughout the study. Additional information concerning the nature of the rhythms exhibited was also collected, but in the interest of space, is not included here.

Table 2

Crying in the Chapel	8	Battle Hymn	10
Blueberry Hill	8	Tennessee Waltz	10
The Naughty Lady	13	Special Angel	9
La Bamba	8	Earth Angel	9
Hi-Lili, Hi Lo	9	On the Street where...	8
Que Sera, Sera	9	Yellow Rose	6
Mack the Knife	7	Great Pretender	8
Fascination	6	76 Trombones	7
I Could Have Danced...	8	My Prayer	8

Interpretation of Results

The dates of 2-Feb to 11-Feb served as the pre-training period, 16-Feb to 4-Mar as the training period, and 9-Mar to 18-Mar as the post-training period. The overall averages for the total number of responses were calculated. The pre-training responses for all songs averaged at 4.8, the training period with a demonstrated rhythm had an average of 5.8, and the post-training sessions garnered an average of 4.6. These statistics indicate that when someone actively engaged in performing rhythm patterns with the residents, their responsiveness increased, whether or not the designated rhythm was pattern was reproduced by the residents. It should also be noted that averages from pre-training to post-training increased by 0.2, in the performance of the designated rhythms for each song which could indicate a small amount of memory retention over the weeks of research.

The results of Table 2 show the many different types of responses for different songs. Though every song has many different rhythmic expressions, "The Naughty Lady of Shady Lane" is especially interesting as it had thirteen different rhythm patterns performed during its presentation. Part of this phenomenon can be attributed to the Latin rhythm, but this cannot be the sole factor at work, because "La Bamba" is also a Latin song, yet is lower on the hierarchy of diversity of rhythmic responses. Other rhythms patterns led to the development of creative outlets within the parameters of the song's rhythmic structure. It should be further noted that these rhythms were recorded across times. This shows that the patients were not necessarily imitating each other (where one was playing a rhythm and the rest decided to follow along), but instead represent genuine perception of the rhythm pattern and creation of an output to represent it.

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