Effectiveness of music therapy on quality of life among elderly

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Abstract

Objectives: to assess the level of quality of life among elderly, to evaluate the effectiveness of music therapy on quality of life and to determine the association between the level of quality of life and demographic variables among elderly. The hypotheses of the study were there will be significant difference in the mean score of quality of life before and after music therapy among elderly (H1) and there will be significant association between the level of quality of life and selected demographic variables among elderly. (H2).

Methods: An experimental approach, Pre-experimental one group pre-test post test study was conducted to evaluate the effectiveness of music therapy on quality of life with 40 elderly inmates in Old age home (Inba Illam), Pasumalai at Madurai. Total enumerative sampling was used and the data was collected by WHO QOL old BREF scale with interview technique before and after music therapy. Study subjects were given with Music therapy (classical instrumental relaxing music composed by Dr. T. Mythily, Music therapist) in open mode technique to all samples daily for 30 minutes for the period of 24 days.

Results: Before music therapy 29(72%) and 11(28%) respectively belonged to the category of poor and fair quality of life with the mean score of 67.10 and 77.0 and no one had good quality of life. After intervention, 19(47%) and 21(53%) respectively belonged to the category of fair and good quality of life with the mean score of 92.15 and 97.42 and none of them had poor quality of life. The overall pre-test mean score is 69.83 and for the post test is 94.93. There was a significant difference in the mean score of quality of life before and after music therapy i.e the calculated ‘t’ value was 31.078 and it was statistically significant at 0.05 level. Further there was a significant association between the level quality of life and education at 0.05 level.

Conclusion: Thus, study finding concludes that music therapy was significantly effective to improve quality of life among elderly. Further it concludes that Music therapy is cost effective, noninvasive, non pharmacological complementary and alternative therapy to improve the quality of life among elderly.

Keywords: Music therapy, quality of life, elderly.

1. Introduction

Age is a slowing down of everything except fear and worries” (Mignon Mc Langhin., 1960)

In India, Population ageing, the process by which older individuals come to form a proportionately larger share of the total population, is one of the most distinctive demographic events of the contemporary world. Initially experienced in the more developed countries, the process is now rapidly approaching the developing world. Although not a global phenomena yet, various predictions indicate that population ageing is going to become a major global issue in the years to come (Kuruvila, 2010) [1]. The need to provide quality mental health care for elders in nursing home settings has been a critical issue, as the aging population grows rapidly and institutional care becomes a necessity for some elders. (Joyce & Fitzpatrick, 2008) [2].

Music is moral law. It gives soul to the universe, wings to the mind, flight to the imagination, a charm to sadness gaiety and life to everything. It is the essence of order, and leads to all that is good and beautiful. Gerontological consideration explains that music therapy provides comfort to the elderly, music relieves the stress and anxiety. Music therapy minimizes the pain and enhances sleep. Further it soothes and enhances over all wellbeing by adding quality to their life. (Lalitha, 2009) [3] Luzny, J & Ivanova, K. (2009) [4] conducted a cross-
A sectional study on Quality of life in hospitalized seniors with psychiatric disorders. The researcher involved 297 patients in two study groups from two main health care institutions in the Kromeriz District, the Psychiatric Hospital Kromeriz and St. Vincent de Paul Hospital. The WHOQOL-BREF questionnaire, MMSE, GDS, patient medical records, interviews and psychiatric assessment were used in the study. Study revealed low quality of life in hospitalized seniors together with a high prevalence of under diagnosed depression and dementia. (Luzny & Ivanova, 2009) [4]

Lee, Y.Y, Chan, M.F & Mok, E. (2010) [5] conducted an experimental study on effectiveness of music intervention on the quality of life of community-dwelling older Chinese people in Hong Kong. A randomized controlled trial design used with 66 older people (31 in music group and 35 in control group), aged from 65 to 90 years were assigned by the researcher to undergo either a 30-minute music intervention or a rest period for 4 weeks. WHOQOL-BREF tool used to assess QOL. Results revealed that Quality of life improved weekly in the music group, indicating a cumulative dose effect for those in the music group compared with the controls (P< 0.05). (Lee, Chan & Mok, 2010) [5]

Chan, M.F, Chan, E.A, Mok, E, & Kwan Tse, F.Y. (2009) [6] conducted an experimental study on effect of music on depression levels and physiological responses in community-based older adults, Hong Kong. A randomized controlled study with 47 elderly people (23 using music and 24 controls) was conducted. Blood pressure, heart rate (HR), respiratory rate (RR), and depression level variables were collected. Results revealed that in the music group, there were statistically significant decreases in depression scores (P < 0.001), blood pressure (P = 0.001), HR (P < 0.001) and RR (P < 0.001) after 1 month. (Chan et al, 2009) [6]

Methodology
A Quantitative approach, Pre experimental one group pre-test post test design was used. The study was conducted in Old age home, Pasumalai, Madurai, Tamilnadu. A formal approval was obtained from the authorities of the home and ethical consent was obtained from all subjects. Total enumerative sampling technique was adopted to select the sample of 40 elderly inmates. Terminally ill and severe hearing loss elderly persons were excluded from the study. Standardized tool i.e WHO Quality of life OLD BREF scale (WHO QOL) was used to assess the level of Quality of life before and after Music therapy. The reliability of the WHO QOL was calculated by Cronbach's alpha and calculated value was 0.89. For each sample, the researcher spent 20 minutes to complete the data collection process by interview technique before and after the intervention. Study subjects were given with intervention i.e Music therapy (classical instrumental relaxing music composed by Dr. T. Mythily, Music therapist, which was composed with 4 rag's include Abheri, Malayamarudham, Sahana and Surutti) in open mode technique to all samples daily for 30 minutes as a group session for the period of 24 days. The data was analyzed by SPSS 16 version by descriptive and inferential statistics.

Results
The demographic variables of the study were age, gender, marital status, education, nature of previous occupation, source of income, duration of stay, sleep, activities at present, suffering with chronic illness and suffering with illness at present. Frequency distribution, mean score, standard deviation and percentage of quality of life before and after music therapy was calculated as per standard scales criteria (Table 1 & 2).

Table 1: Frequency Distribution, Mean and Percentage of Quality of life N=40

<table>
<thead>
<tr>
<th>Level of quality of life</th>
<th>Pre test</th>
<th>Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>Mean</td>
</tr>
<tr>
<td>Poor QOL (24-71)</td>
<td>29</td>
<td>67.10</td>
</tr>
<tr>
<td>Fair (72-95)</td>
<td>11</td>
<td>77.00</td>
</tr>
<tr>
<td>Good (96-120)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2: Overall Mean, Standard deviation and Mean difference N=40

<table>
<thead>
<tr>
<th></th>
<th>Pre test</th>
<th>Post test</th>
<th>Difference in mean%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean %</td>
<td>Mean</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Overall</td>
<td>69.83</td>
<td>5.81</td>
<td>0.92</td>
</tr>
</tbody>
</table>

There was a significant difference in the mean score of quality of life before and after music therapy i.e the calculated 't' value was 31.078 and it was statistically significant at 0.05 level. Hence it was concluded that music therapy was significantly effective in improving quality of life among elderly and the research Hypothesis (H1) is accepted (Table 3).

Table 3: Paired t’ test showing association between pre and post test N=40

<table>
<thead>
<tr>
<th>Effectiveness in Mean(Mean difference)</th>
<th>df</th>
<th>‘t’-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.10</td>
<td>39</td>
<td>31.078</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

* = statistically significant at 0.05 level.

There was significant positive association between education and level of quality of life i.e calculated chi-square value is 3.87 and it was statistically significant at 0.05 level. Hence the research Hypothesis (H2) is accepted. (Table 4)
Table 4: Chi-square test ($\chi^2$) showing association between quality of life and demographic variables N=40

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Fair (f)</th>
<th>%</th>
<th>Good (f)</th>
<th>%</th>
<th>$\chi^2$</th>
<th>df</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. No formal education</td>
<td>14</td>
<td>35</td>
<td>9</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. literate</td>
<td>5</td>
<td>13</td>
<td>12</td>
<td>30</td>
<td>3.87</td>
<td>1</td>
<td>0.04*</td>
</tr>
</tbody>
</table>

* = statistically significant at 0.05 level.

Discussion
In the present study, before music therapy among 40 subjects 29(72%) and 11(28%) belonged to category of poor and fair quality of life respectively with the mean score of 67.10 and 77.0 and no one had good quality of life. Further overall pretest mean score was 69.83, standard deviation was about 5.81 and the mean percentage was 58. Similarly, a cross-sectional study was conducted on Comparison of quality of life and mental health among elderly people. Samples were 60 and above years living 247 elderly in rural and suburban areas of northern Thailand. The study revealed that subjects from suburban areas had a higher quality of life in aspect to physical health ($p = 0.011$), mental health ($p = 0.025$), and social relationships ($p = 0.012$) than rural subjects. (Apidechkul, 2011) [7].

In the present study it revealed that after music therapy post test level of quality of life improved and shown that 19(47%) and 21(53%) belonged to the category of fair and good quality of life respectively with the mean score of 92.15 and 97.42 and no one belonged to poor quality of life. After music therapy overall post test mean score was raised to 94.93 from the pretest mean score 69.83. Post test standard deviation was about 3.38 and the mean percentage was 79. Further There was a significant difference in the mean score of quality of life before and after music therapy i.e the calculated ‘t’ value was 31.078 and it was statistically significant at 0.05 level.

Similarly an experimental randomized controlled study was conducted on exploring the effect of music on quality of life and depression in older people with dementia. Researcher’s randomized controlled trial investigated 47 older people with dementia using the Dementia Quality of Life and Geriatric Depression Scale. The control/reading group reported higher mid-point feelings of belonging than the music group ($F (1, 45) = 6.672, p<.05$). Music session attendance found improvements in self-esteem over time ($F (2, 46) = 4.471, p<.05$) and fewer depressive symptoms over time ($F (2, 22) = 8.129, p<.01$). Findings suggested music and reading activities can improve quality of life, self-esteem, belonging in some older people with dementia. (Cooke et al, 2010) [8].

In the present study there was significant positive association between education and level of quality of life i.e calculated chi-square value is 3.87 and it was statistically significant at 0.05 level. Similarly, A Descriptive study was conducted on assessment of quality of life and socio demographic characteristics revealed that elderly had low quality of life generally in many domains. Study explained that unmarried and uneducated had low quality of life compared to them who had married and educated at 0.05 of significance. (Lucas, Monteserin & Junca, 2003) [9]

Conclusion
Thus, study finding concludes that music therapy was significantly effective to improve quality of life among elderly. Further it concludes that Music therapy is cost effective, noninvasive, non pharmacological complementary and alternative therapy to improve the quality of life among elderly.

Reference