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Lifelong Learning and Musical Interaction – Integrated Musical Activity Increases the Well-being of Older People

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Abstract

The research objective was to determine whether integrated musical activities have any significant connection to the daily activities and well-being of older people. Altogether 205 older people (aged 75 to 95 years) participated from senior citizens' homes, hospitals and day care departments all over Finland. Half of the subjects were placed in music groups and half in a control group.

The study concerns the efficacy of the *Virkistysverso* music programme for older people. The aims of the programme were to increase well-being in elderly people and develop a new means of accessing lifelong learning for seniors in residential care. Another purpose of the programme was to activate older people through holistic and integrative musical activity, in order to attain holistic experiences through the music as well as to enjoy it.

The research methods included ADL-scores combined with an evaluation score of the older people's skills and levels of communication and memory. Their mood was also evaluated. The evaluation was done by the nurses who took care of these individuals. The development of abilities and activity levels of the older people was examined on the basis of the discrepancy between the pre-evaluation and post-evaluation measurements. The significance of the difference in mean points and discrepancy points was assessed with t-tests.

The results showed significant differences between the music group and the control group concerning the scores for daily activity and independence (ADL). The music group also exhibited a significant progress in memory skills, perception skills, mood and social behaviour compared to the control group. According to the results the *Virkistysverso* integrated musical activity program seem to be very effective in fostering for the holistic well-being of the participants.

It can be concluded that lifelong learning is already present in senior citizens' homes. Still we need to develop cultural co-operation between nurses and music pedagogues as well as use creative thinking in hospitals to increase meaningful interaction among older people and between them and their nurses through music and other arts.

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1. Introduction

Lifelong learning and individually absorbing activities are essential for human well-being at any age. This article discusses the role of music-based activities in developing the well-being of older people. The concept of well-being is broad and well-being is also very subjective. The article concentrates on the behavioural aspects of well-being in the elderly e.g. physical or mental independence in everyday life, mood and communication activity as evaluated by an observer. The ageing of the Europe's population is accelerating and the number of people aged over 60 is now increasing twice as fast as it did prior to 2007. In 2050 close to 30% of the EU's population will be over 65 years of age and 11% will be over 80. Mental health problems, including depression and other mood disorders, are among the most prevalent and serious health problems found in older people, together with physical ailments including neurodegenerative disorders such as Alzheimer's disease and other forms of dementia. These various mental and physical problems often co-occur in older individuals. However, Europe's society and its health care workforce is not yet always fully prepared to respond the health needs of older people, i.e. by promoting an adequate level of health awareness; by providing preventive intervention-care and treatment for older people; and by supporting informal carers whom they need and deserve. According to the conclusions of the "Mental Health and Well-being in Older People Making it happen" conference (2010), we should now develop and carry out advocacy activities across sectors for the introduction and implementation of measures that strengthen the mental and physical health of older people and promote their well-being. We are being asked to develop new activities and good practices that promote the mental and physical health and well-being of senior as well as support the settings and care cultures of the elderly.

The public discussion in Finland surrounding older people's care has been quite active during in recent years. An individual's welfare is a very personal experience and it is important to discuss how the present structures support one's own responsibility and activity with respect such welfare and the kind of values that must be incorporated when the elderly care is designed. Laine (2005) states, that problems in senior citizens' homes are not solved only by increasing the number of staff, discussing the quality of care, or monitoring productivity figures. It is a more holistic, and more diverse evaluation is needed of how practices might influence factors in the environment to increase the elderly's well-being quality of life. The majority of residents in senior citizens' homes are not able to estimate the quality of their care and often have no close friends or relatives who could regularly participate in and taking care of their needs. Further, great differences exist between countries in how older people are cared for, and the culture of care in general.

1.2 Previous research

One's welfare or well-being is a subjective feeling and is related to mood particularly happiness. Well-being expresses the affirmative features of one's health. From the time of Aristotle well-being has been most important goal in life in Western countries. Aristotelian welfare meant active participation in life through which well-being and possibly also happiness are attained. In Finland the concept of welfare has been firmly brought to the fore by Hyyppä and Liikanen (2005) among others, who's idea of health is more culturally based than among earlier researchers. The social dimensions of health and welfare as well as cultural and geographic differences with respect to health remain problematic. Increasing the role of citizens has been mentioned as a central concept and means utilizing citizens' own resources in the area of health and welfare. Partnership refers to activating members of as many communities as possible towards spontaneously increasing people's well-being (Hyyppä & Liikanen 2005, 34). Hyyppä, et al. (2006) showed that among Finland Swedes leisure activities significantly promoted men's health and welfare. Culture and its traditions are a community's sustenance. According to Hyyppä (2003) exposure to cultural hobbies and music are important for the health and welfare of people. In a Swedish questionnaire survey of 65-75 -year -olds a positive association was found between musical activities and feelings of satisfaction and psychological welfare (Laukka, 2010). Listening of music induced pleasure, a positive mood and relaxation. In addition in Hays & Minichiello's (2005) group interview study older people's musical activities were positively associated with favourable mood and self-esteem as well as independent initiative.

Sherratt, Thornton & Hatton (2004) conducted a qualitative review of 21 clinical studies that looked at the effects of a variety of musical activities on emotional and behavioural responses in people with dementia. They found that in all of the studies music appeared to have a range of applications in dementia care. As well, many other studies have documented the beneficial effects of music interventions in a range of clinical populations (e.g. Aldridge,

1993; Biley, 2000; Kneafsey, 1997), of which some have focused specifically on the use of musical activities with people suffering from various memory illnesses (e.g. Koger & Brotons, 2001; Lou, 2001). According to these studies, music therapy helps promote the use of preserved skills and abilities, increases subjective well-being, and assists in aid the management of behavioural problems. The current view of dementia treatment is based mainly on the traditional medical treatment model, despite music therapy's emphasis on the importance of human interaction in musical activities and for the subjective well-being of the individual.

For more than 100 years it has been known that patients with severe nonfluent aphasia are better at singing lyrics than they are at speaking the same words. This has led Schlaug et al. (2010) to develop Melodic Intonation Therapy (MIT), where music is employed to treat older people suffering from aphasia. However the use of this therapy still needs further study.

Särkämö et al. (2008) found out that regular listening to music had significant effects in the rehabilitation of memory, attentiveness and mood after stroke, and have emphasized that listening daily to music is valuable tool in the rehabilitation of stroke patients.

In this research music activity was used without any specific connection to certain illnesses or diseases. The scope of interest encompassed the connections between integrative musical activity and old people's general well-being in terms of daily activities, memory and communication for example. The concept of well-being is broad; here we concentrate only on a behavioural evaluation of the factors connected to well-being: physical functioning, (independent) activities in daily living (ADL) and mental/social functioning including memory, communication skills and mood. Well-being is also very subjective and the article does not concentrate on this aspect as it relates to perceptions of health happiness and life satisfaction.

3. Study design

Altogether 205 older people (75 -95 years of age) participated in the study carried at senior citizens' homes, day care departments and hospitals across the Finland. The test group was the music group, where a total of 104 older people participated weekly in integrative musical activities. Of those 31 were men and 73 women. The control group consisted of 35 men and 66 women. Altogether 161 participants were living in senior citizen's homes, 32 in hospitals and 12 were being treated in a senior's day care. In each facility half of the participants were in music groups and half in control groups. The groups were formed randomly but for ethical reasons the subjects were asked if they were willing to participate in music activities once a week. Only a few refused, and many of those who were selected for the control group expressed an interest in participating. It was therefore decided that following members would be able to partake in the same kind of musical activities after the research. Diagnostic information on the individuals was not available, but in the qualitative material of the evaluations it could be seen that some of the participants in both groups were suffering from some form of dementia or other disease. The measures used were ADL-scores combined with an evaluation score of the older people's skills and activity levels with respect to communication, memory and mood.

The *Virkistysverso* integrated music-activity programme, (2007) took 20 hours to complete, and was weekly sessions for 5 months. The programme involves singing, storytelling, music listening, playing instruments, musical movement, and looking at art. The purpose of the programme was to get older people involved in music, in order to achieve a holistic, self-affirming and enjoyable musical experience.

The evaluations were carried out before and after the 5 *Virkistysverso* programme in which older people's own nurses (28) evaluated their daily activities. The development of the participants' abilities and activity levels of the older people was examined on the basis of the discrepancy scores of the pre-and post evaluation. The significance of the difference in mean points was assessed by t-test and the development with discrepancy (post-pre) points by t-test.

4. Results

Table 1 presents the demographic background variables of the groups and the pre-evaluation t-test results which show the differences between the groups before the programme. Table 2 presents the differences between the groups following the programme according to the t-test post-pre-evaluation discrepancy in points.

Table 1. Demographic background variables of the groups

Gender

Gender	Music group	Control group	Total
Female	73	66	139
Male	31	35	66
Total	104	101	205
Age	Music group	Control group	Total
75– 80	11	11	22
81– 89	78	78	156
90– 95	15	12	27
Total	104	101	205
Environment	Music group	Control group	Total
Senior citizens' home	82	79	161
Hospital	16	16	32
Day care department	6	6	12
Total	104	101	205

The chi-square test found no significant connections between the demographic factors of the music and control groups: gender: $\chi^2 = 0.35$, $df = 1$, $p = 0.553$; age: $\chi^2 = 0.294$, $df = 2$, $p = 0.865$; environment: $\chi^2 = 0.012$, $df = 2$, $p = 0.994$. In addition chi-square test found no relationship between the other demographic factors, for example between gender and age ($\chi^2 = 2.59$, $df = 2$, $p = 0.274$) or age and environment ($\chi^2 = 5.12$, $df = 2$, $p = 0.275$). Only one little difference between the environment and gender was found concerning gender and day care departments: 7 males vs. 5 females ($\chi^2 = 4.83$, $df = 2$, $p = 0.089$).

The pre-evaluation t-test results showed that the music group was significantly more enthusiastic in singing ($p = 0.001$), giving their perceptions ($p = 0.030$) and making suggestions for enhancing the atmosphere ($p = 0.020$). No significant differences were found in the other evaluation sections of the pre-evaluation: Daily Activity ADL, $p = 0.630$; memory, $p = 0.330$; communication $p = 0.280$ and mood, $p = 0.460$).

The t-test results of the discrepancy in points (post-pre-evaluation) showed significant differences between the music and control groups (see Table 2).

Table 2. The differences in discrepancy points between groups (t-test)

Group	M	SD	N	t	df	p
ADL Daily Activity						
Music group	0.31	0.73	104	4.22	203	0.001
Control group	-0.22	1.02	101			
Moving activity						
Music group	0.77	0.99	104	1.64	203	0.102
Control group	-0.20	1.38	101			

Eating activity						
Music group	0.03	0.65	104			
Control group	0.03	1.40	101	-0.006	203	0.996
Independence of restroom behaviour						
Music group	0.11	1.08	104			
Control group	-0.15	0.94	101	1.80	203	0.074
Personal hygiene activity						
Music group	0.20	0.99	104			
Control group	-0.11	0.92	101	2.33	203	0.021
Communication activity						
Music group	0.22	0.76	104			
Control group	-0.17	0.91	101	3.33	203	0.001
Memory						
Music group	0.22	0.76	104			
Control group	-0.17	0.91	101	3.33	203	0.001
Mood						
Music group	0.29	0.87	104			
Control group	-0.09	0.77	101	3.34	202.3	0.001

5. Conclusion

On the basis of our results we are able to conclude that *Virkistysverso* integrative music programme can be used to improve the older people's well-being, and that gerontologists should be more aware of the potential of music or other artistic interaction in managing the welfare of the elderly. The starting point is the fact that the music-based activity can be seen as potentially important part of the lives of every senior citizens. Secondly new cooperative efforts between the professionals in health care and cultural services are needed. Third sufficient nursing staff with a new attitude towards musical interaction is also required. It is essential to allocate time for free and relaxed musical periods instead of viewing music as displacing “more important” routine works. It would be desirable to organize longer holistic musical interaction sessions (e.g. one hour every week) and smaller musical moments each day within the nursing regimen. Moreover the positive attitude would facilitate focusing of resources and time management. The inadequacy of the nursing staff resources however is a problem, and it must be addressed. Every human being needs time, peace and personal attention when ageing and becoming ill. Because the *Virkistysverso* music programme was integrating storytelling, movements and looking at art pictures with music with singing and listening, we cannot speak only about the positive effect of music itself on the well-being of older people. According to our results, it is obvious that this kind of broader, integrative artistic and musical activity increases older peoples’ well-being. It is also important to study the effectiveness of other kinds of interactive activities.

Lifelong learning already exists in our facilities for the elderly. Older people continue to learn new things and this benefits them in many ways. Also everything what has been learned earlier (e.g. childhood songs) become

valuable tools of interaction. To this we need to add more musical activities and develop greater co-operation between geriatric nurses and music (and other arts) pedagogues. We need to use creative thinking in facilities for the elderly to increase meaningful interaction among older people and between them and their nurses through integrative music activities.

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