

INFLUENCE OF ART EDUCATION ON IMPROVING COMMUNICATION SKILLS OF MULTIPLE SCLEROSIS (MS) PATIENTS

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Abstract

The presented results reveal the dimensions of influence of art education on the improving of communication skills in patients with MS. Applied art education activities based on the pilot research data proved that personal motivation for an active participant in social life could be promoted by optimizing communication skills. All too often, problems of communications skills in MS first of all are linked to somatic and neurological problems, but from the point of view of social paradigm – person's communication problems deal with effective social participation and social involvement into the society. The aim of the research is to prove and reveal changing characteristics of communication skills of MS persons under the influence of art education.

***Key words:** Patients with MS, communication dimensions, art based education.*

Introduction

Approximately 23 of patients with MS have speech difficulties, and dysarthria is common. Due to a vast array of affected areas of the central nervous system, any type of dysarthria is possible. There have also been problems with prosody, phonation and articulation with some patients. Characteristics of speech difficulties include harsh or breathy voice, difficulties with controlling the pitch, rate, and volume. Approximately 23 of people with MS are thought to have difficulties with articulation and 13 have some form of hypernasality.

One of the ways to influence the changes in dimensions of social communication in patients with MS is the application of art education as a form and precondition of social integration. Communication is a complex phenomenon in which psychical, motor, cognitive activities are involved. Perception of speech, understanding of social interaction and situation, the content of message are the main requirements for social participation and public activities. Beversdorf, White, Cheever, Hughes, Bornstein (2002) point out, that communication problem can occur due to cognitive, motor and even behavioral or emotional disturbances. Usually these characteristics of communication are impaired facing with multiple sclerosis.

Disease is defined as non-contagious, lifelong chronic disease that causes symptoms of motor impairment, language, memory, deficits of cognitive activity and problems in communication that depend on the level of impaired areas of the cortex. These impairments sometimes facilitate non-adequate behavior models (Diekamp, Kalt, 2000; Blaney; Lowe-Strong, 2009). Changes in behavioral characteristics are closely connected with cognitive impairments such as difficulty performing multiple tasks at once, difficulty following detailed instructions, loss of short term memory, emotional instability, and fatigue. Mentioned symptoms burden early acquired communication skills and block the forming of new ones. Other problem related with the problems in communication is depression, as well as feelings of anger, anxiety, frustration and hopelessness. Usually people with MS have emotional problems in interacting with environment. Situations that exclude (or partly exclude) a person from usual social activities, that give him/her self-satisfaction, create state of despair and feeling of loneliness. Impairment of cognition and high-level language functions are symptoms that stand out against MS background. Communication is closely connected with memory processes: it requires the ability to remember and relate information, to draw conclusions and to express them in words and structured sentences. Personal activity, cognitive flexibility and behaviour appropriateness are necessary for pragmatic competence in this domain, which means *competence in social communication* (Beverdors, White, Cheever, Hughes, Bornstein, 2002).

It means that MS process has negative impact on the maintenance of a positive quality of life and psychosocial well-being. Even the minimal communication impairment can influence the successful interaction achieving occupational, personal and interpersonal goals. As MS typically occurs in early adulthood and it is a long lasting process; some patients with MS have to cope with communicative difficulties for the greater part of their adulthood – the most productive and creative period of human life.

Patients with MS may have difficulty in understanding involute structures of language, integrating and recording spoken or written information, drawing conclusions or understanding context. Communication disorders occur due to the several typical factors that are conditioned by MS: insufficiency in perception, verbal conceptual reasoning, and sentence construction. Insufficiency of communication skills leads to lack of person's self-awareness, stressed social situations. Declining amount of people with whom MS patients could develop relations leads to social exclusion. The impact of these problems on daily life is high and can lead to isolation, getting into the groups of socially disadvantage persons and to decreasing the level of activity and participation in work and social life and education.

When there is a lack of interest coming from the nearest environment, there is less motivation and it means less communication. Other area in which people with MS face with outcomes of communication disorders are situations of social participation in which verbal initiative and support in keeping conversation become obvious. Hence, such psychological condition of persons with MS interferes with effectiveness of communication, as well. Lack of self-awareness, constructive behavior and mood state: depression, anxiety, difficulties in concentration, emotional liability, first of all are observed (Renom, Nota, Martinell, Gustafsson, Warinowski, Rosa Terré, 2007).

Other aspect that affects communication skills of patients with MS is fatigue that could be assessed as one of the essential features of MS. Normal tiredness and fatigue associated with MS differ. Fatigue that is typical to MS requires physical and mental efforts, but the feeling of tiredness is much stronger than would normally be expected. Due to extremely unstable balance of energy and of its dissipation, mental functions are also affected by fatigue.

Talking about social rehabilitation of persons with MS, in maintenance of communication skills, art education may be effective. The application of art therapy and analysis of modeling perception and life through the arts could be one of the goals of treatment. Art education

in connection with art therapy could serve as well as the treatment, assessment or research of mental health issues of persons with MS. This type of psychotherapy is based upon the presumption that a person is indirectly involved in life-enhancing creative processes and analyses of these processes and models in order to increase self-awareness and empathy, to set (or renew) closer relationships with external reality and within one's self, to improve skills to cope with problems, negative experiences or psychic trauma, at the same time changing his/her cognitive abilities participating in creative processes. As involvement in art education session is a voluntary process it acts as deliberate long lasting curative motive.

Art therapy integrates all the fields of human development, and could be applied solving problems of different societal groups. It is an effective way to help people to master with anxiety, depression, and other mental or emotional problems and disorders, trauma and loss; physical, cognitive, and neurological problems; and psychosocial difficulties related to medical illness. Art therapy as curative activity has generated many specific definitions, but mostly two general categories are used. The first involves a belief in the specific input of the creative process as therapeutic. Any art making is seen as an opportunity to express one's self imaginatively, authentically, and spontaneously, an experience that, over time, can lead to personal fulfillment, emotional reparation, and recovery (Malchiodi, 2006).

Another definition of art therapy is based on the idea of arts as symbolic communication. This approach emphasizes the products as helpful in communicating issues, emotions, and conflicts. According to this approach art becomes significant in developing and initiating verbal interpersonal activity, in achieving insight, resolving conflicts, solving problems, and formulating new perceptions that in turn lead to positive changes, growth, and healing (Malchiodi, 2006).

Neuroscience points that in learning process the brain physically changes in case of positive emotional background. Emotions arise and go into force due to modification of adrenalin, serotonin, and dopamine in synapses. Dopamine has its primary effects on frontal cortex. Dopamine is produced in the brainstem, which is the oldest part of the brain evolutionarily speaking, but it is released in the newest region of cortex, the part that is used to create ideas, make decisions, and plan actions (Zull, 2002). The misbalance of hormone in MS mentioned by many researchers (Richards, Roberts, Mathers, Dunstan, McGregor, Butt, 2000; Pall, 2001; Pall, Satterlee, 2001), presupposes the idea, that art education could actuate on people with MS positive changes in production of hormones that are significant for cognitive activities. Changing connections in the brain is inwardness of learning. Art engages individual's state emotionally. In order to seek any results a person must show some intensity of effort and focus for learning. It also changes the brain.

Working with people suffering from MS supportive relationship between person and educator is necessary to guide the art-making experience and to help the individual find meaning through it along the way, as well as to give the art product personal meaning - to sense and name a problem (Malchiodi, 2006; Malchiodi, 2003; Buchalter, 2004). Art educator facilitates exploration, observing and trying to understand an inner change, that is why in many cases educators use art therapy as assessment and evaluation of emotional, cognitive, and developmental conditions. Slight difference could be defined between terms *art therapy* and *art education as therapy*. The second term is more orientated to art education that could have a meaning of facilitating communication abilities, changing person's point of view solving personal interaction problems.

Object of the research: Changes of communication skills in patients with MS using art education.

Aim of the research: To reveal the changes of communication skills applying art education.

Problem of the research: What communication problems are going to be diminished under the impact of art education?

Extent of the research: 46 patients with MS from Šiauliai County from 35 to 48 years of age.

Methodology and method of the research

Main methodological issues that help to understand and shape communication issues in persons with MS were *health believe* model that attempts to explain and predict health behaviors, this is done by focusing on the attitudes and beliefs of individuals (Glanz, Rimer, Lewis, 2002), and *theory of planned behavior*, as well. Theory of *Reasoned Action* suggests that a person's behavior is determined by his/her intention to perform the behavior and that this intention is, in turn, a function of his/her attitude toward the behavior and his/her subjective norm. The best predictor of behavior is intention. Intention is the cognitive representation of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior. This intention is determined by three things: the attitude toward the specific behavior, the subjective norms and the perceived behavioral control (Aronson, Wilson, Akert, 2003).

Questionnaire for setting up changes in communication skills under the influence of art education of persons with MS was designed. It consists of three blocks:

- a) Demographic information;
- b) Evaluation of education sessions;
- c) Self-evaluation of changes in own communication skills.

The research data was computed using methods of descriptive statistics.

The content of art therapy sessions was based on the practice of Movement Therapy (Vikström, Josephsson, Stigsdotter-Neely & Nygård, 2005) that points out a significant improvement with regards to functions areas which measured motor speed and coordination of the arm-hand spatial capabilities, spoken word flow, and short term memory. Every session took part during two hours, punctuated by one twenty minute pause, once a week under the leadership of occupational therapist. The whole time of movement therapy was 4 months.

The session begins with a greeting, followed by deep breathing exercises and stretching movements which are accompanied by classical music. Then the therapist gives a detailed instruction of the new rhythm sequence to be learned. The goal of session is to learn an entire score, consisting of many learned sequences of music and corresponding body movements. The entire score can last between three to four minutes in duration.

Other art education form that was applied is decoupage. It is a kind of art therapy in art therapy sessions of which the focus is on person's inner experience – feelings, perceptions, and imagination (Malchiodi, 2006). While in art therapy social skills are involved, the emphasis generally is put first on developing and expressing images that come from inside the person, rather than those he or she sees in the outside world. Supportive relationship with trainer is necessary to guide the art-making experience and to help the individual find meaning through it along the way. The other important aspect is the attendance of the individual to her own personal process of making art and to giving the art product personal meaning, i.e., finding a story, description, or meaning for the art. Decoupage sessions were organized once a week, during two hours; the whole time of art education was 4 months.

Analysis of the research data

Changes of communication skills in patients with MS using art education were tested according to the aspects of age, participation in labour market and level of education. Research

was done with volunteers who were included in the list of permanent observation of neurologist. Women, who took part in this research, participate in the pilot study under the guidance of researchers of Faculty of Social Welfare and Disability Studies, Šiauliai University. Art education sessions took place in university laboratory of Corrective Physical Activity during 6 months twice a week and were moderated by students who were prepared as trainers in art education. Duration of session was 1 hour.

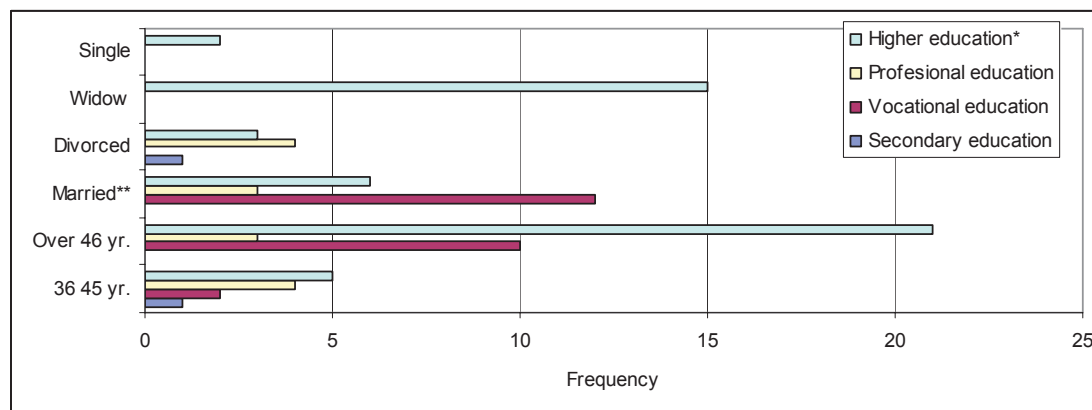


Fig. 1. Demographic characteristics of MS women

According to the research data it has been set up that most often a woman was widow over 46 years and having higher education. It is not typical, talking about the whole general set, but it is typical that educated women are more active and motivated in any kind of social participation. Thus, this pilot analysis mostly concerns women with higher education. Talking about marital status of women, the presumption can be made that it could be connected with developing of communication skills. In analyzing demographic data it has been realized that only 22 of all women live in family. Other part of women belongs to the groups of widow (12), divorced and single (6). It means that the nearest environment of women with MS did not support development of communication skills. Assessing women according to the level of education it has been set up that most of them have higher education and a few of them have secondary education. The presumption can be made that women, who are educated and have deeper experience in keeping and facilitating interrelations, might have more motivation for cognitive activities, interpersonal contacts and social participation (Fig. 1).

Level of MS communication skills

Before planning art education session in order to optimize communication skills of women with MS, their own perception of communication level in general has been revealed. As it was mentioned above, women assessed their own communication skills in work activity and personal interrelations.

Table 1. Self evaluation of communication skills

Indicators According Age	Agree		Disagree		It happens sometimes	
	36-45 yr.	>46 yr.	36-45 yr.	>46 yr.	36-45 yr.	>46 yr.
Self-feeling	2	21*	9	6	1	7
Work with energy	3	20*	1	7	8	7
Easily get acquainted with other people	12	16*	-	13	-	5
Sharing success with other people	10	17*	1	14	1	3

Note: * level of significance $p < 0,05$

Age is one of objective attributes that could influence effectiveness of communication skills of persons with MS, because age is directly connected with social experience that forms communicative behavior. Significant results ($p < 0,05$) were set up assessing women's attitude towards their own abilities in communication (Table 1). Group of MS women over 46 years of age demonstrated more self-confidence in getting acquainted with strangers, sharing their success with others. On the one hand, the presumption can be made that duration of disease is not an essential factor for communication skills quality and women demonstrate their obtained social experience and acquired habits that let keep communication in rather high level even in later periods of disease. On the other hand, this fact could be explained as the sign of disease progress, when due to affected cortex, cognitive and critical thinking is impaired and women demonstrated lack of adequate self-evaluation.

Preference of Art education in improvement of communication skills

Working in art activities patients with MS developed self-confidence, social and emotional growth. They perceived themselves as persons capable for creation that is personally satisfying and publicly acknowledged.

Table 2. Preferable Self-realization in art as education field

Type of art education	Age*		Occupation		Education			
	36-45 yr.	>46 yr.	Working	Out-of-work	Secondary	Special	Higher	University*
Painting education	2	17	16	3		3		16
Music education	5	6	1	10	1	3	6	1
Moving education	5	8	2	11		6	1	6
Performance	-	2	-	2				2
Uncertain	-	1	1	-				1

Note: * level of significance $p < 0,05$

Analyzing research data, it has been realized that significant preference for self-realization is painting therapy as an activity of self-realization (Table 2). Group of women over the age of 46 years prefer painting therapy most of all ($p = 0,00$) and in the age group from 36-45 years this kind of activity is less desirable. Being younger they more often indicate music or moving therapies as preferable. The same kinds of art education might be chosen assessing the results according to the occupation. Education aspect in choosing the type of art education show that women, whose level of education is higher have more information about art education or art therapy in whole, so they indicated larger variety of things they could

perform in art education sessions. It means that women with MS could perform some kind of self-realization in art education.

Table 3. Preferences of art education of women with MS

Preferable kind of art education	Age		Occupation		Education			
	36-45 yr.	> 46 yr.	Yes	No	Secondary	Special	Higher	University
Painting	2	6	5	3	-	3	-	5
Decoupage*	-	10	10	-	-	-	-	10
Music	3	3	1	5	-	2	3	1
Moving therapy*	7	14	5	16	1	7	4	9
Uncertain	-	1	-	1	-	-	-	1

Note: * level of significance $p < 0,05$

Talking about kind of art education that could be realized in the social rehabilitation process it was set up that there are some differences, attention must be paid to which, because women indicated a few types of preferable art activities (Table 3). Differences are seen in research data analysis according to age, occupation and education. Group of women who are over 46 years of age shows controversial results. It is obvious that lack of self-confidence is typical for women of this age. In reflection on possible self-realization of a person mostly all of the participants of this group pointed painting therapy. But in reality they prefer to participate in moving therapy. It can be connected with knowing characteristics of disease or just looking for something inexperienced. Women can assess progress in loss of motor skills and moving therapy is one of the ways that could stabilize the progress of motor impairments. According to women's occupation the ideas about personal participation in art education field differ. Those who are in labor market relations prefer decoupage, and those who are out of work prefer moving therapy. These results point out that during the day women get tired and decoupage education is rather quiet but at the same time highly motivating, because women could do a lot of things for their everyday life needs at the same giving a great positive emotional input. For those who are out of job moving activity is a way to increase social contacts, to get more physical activity and to manage the progress of disease.

Education in case of preferences in choosing kind of art education has important place. In the most cases women with university education indicated decoupage as preferable activity in the first place and moving therapy in second place. It could be explained as point of some critical thinking, adequate viewpoint on self abilities. Women with special education indicated a lot of different preferences in art education, but no significant marks were set.

Talking about art education as a kind of development of communication skills in general it was realized that the most popular is decoupage art and moving therapy. Painting and music therapies were mentioned as well, but the rate of choosing them was low, maybe these kinds of art education are rather known and demanding some gifts in specific art area.

Evaluation of changes in the MS communication skills

Trying to set any art education tendencies in women with MS it was necessary to reveal their perception of communication level in general. As it was mentioned above, communication skills are obvious in work activity, personal interrelations.

Table 4. Evaluation of changes in communication skills under the influence of art education

Indicators	Became better		Did not become better		Uncertain	
	36-45	>46	36-45	>46	36-45	>46
Age						
Self-feeling	4	22*	7	6	2	6
Energy in activities	3	19*	1	7	7	7
Easy communication with others	10	16*	2	14	1	6
Benevolence	10	17*	1	11	1	3

Note: * level of significance $p < 0,05$

Age is one of objective attributes that could influence the effectiveness of communication skills of people with MS, because age is directly connected with social experience that forms communicative behavior. Significant results ($p < 0,05$) were set up assessing women's attitude on their own abilities in communication (Table 4). Group of MS women over 46 years of age demonstrated more self-confidence in getting acquainted with strangers, sharing their success with others. On the one hand, the presumption can be made that duration of disease is not an essential factor for communication skills quality and women demonstrate their obtained social experience and acquired habits that let keep communication in rather high level even in later periods of disease. But on the other hand this fact could be explained as the sign of disease progress, when due to affected cortex, cognitive and critical thinking are impaired and women demonstrated lack of adequate self-evaluation.

Table 5. Input of Art Education Sessions on Communication Skills of MS Persons

Form of art education	Indicators of Communication							
	Self-feeling		Energy in activities		Easy communication with others		Benevolence	
	Before	After	Before	After	Before	After	Before	After
Decoupage	13	17	8	19	21	26	23	23
Moving therapy	10	22	11	25	18	22	26	34

Analyzing final results of the research and the influence of art education on the changes of communication skills it is obvious that positive effect in this sphere was set up. There was no significance found out in these changes, but the results could be analyzed and assessed as a premise for future more detailed analysis. Those women who prefer moving therapy assess their communication skills as more linked to changes: mostly in getting more energy in various activities. A few changes there were mentioned in the quality of communication with others. Decoupage was very popular among women with MS. The same indicator – energy in various activities – was outlined by this group, as well. Other important changes in the indicators of communication skills are in self-feeling of women with MS (Table 5).

Lack of energy is one of the most common features of MS disease. So art education could be used as a means of management of disease symptoms.

Generalizing the research it would be expedient to mention the ideas that were not directly foreseen in the present research but they are obvious in the results. It has been revealed that the relationship between the arts and learning has maintained a commitment to enrich

internal resources (arts specialists, teachers who have ongoing learning opportunities in the arts, others). The group of women with MS became as a community that is recognized in (and by) creating partnerships, increasing their activities in communication and self-confidence.

Partnerships have emphasized specific role of each individual that participated in the sessions of art education. Improving communication skills of MS women at the same time new knowledge was gained.

Conclusions

1. Situations that exclude (or partly exclude) MS persons from usual social activities, that give him/her self-satisfaction, create state of despair and feeling of loneliness, define communication disorders in interacting with environment.
2. Age is one of objective attributes that could influence effectiveness of communication skills of people with MS, because age is directly connected with social experience that forms communicative behavior. Group of MS women over 46 years of age demonstrated more self-confidence in getting acquainted with strangers, sharing their success with others. In this case the presumption has been made that duration of disease is not an essential factor for communication skills quality.
3. Women who are out of work show much more energy in communication sphere. It might happen due to specific environment in which they act. It helps not only to maintain communication skills, but to develop them, as well. So, communication skills could be maintained better in unemployed women, because they can shape their activity by their own self-feeling. Education level of people with MS has influence on their communication skills.
4. Differences are seen in research data analysis according to age, occupation and education. Group of women who are over 46 years of age shows controversial results. It is obvious that lack of self-confidence is typical for women of this age. In reflection on possible self-realization of a person mostly all of the participants of this group pointed painting therapy. Those who are in labor market relations prefer decoupage, and those who are out of work prefer moving therapy.
5. Talking about art education as a kind of development of communication skills in general it was realized that the most popular is decoupage art and moving therapy. Painting and music therapies were mentioned as well, but the rate of choosing them was low. Perhaps these kinds of art education are rather known and demanding some gifts in specific art area.
6. Analyzing the final results of the research and the influence of art education on the changes of communication skills it is obvious that positive effect in this sphere was set up. In spite of that, significance changes were not found out, the results could be analyzed and assessed as a premise for more detailed analysis in the future. Lack of energy is one of the most common features of MS disease. So art education could be used as a means of management of disease symptoms.

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