

# APPLICATION OF ART EDUCATION IN THE MANAGEMENT AND REDUCTION OF SIGNS OF FATIGUE IN WOMEN WITH MS DIAGNOSIS

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## **Abstract**

In the article presented results reveal dimensions of influence of art education on the reduction of fatigue in patients with MS. Personal motivation for active participant in social life could be promoted by optimizing common art education activities that have significant impact on reduction of fatigue signs. All too often, problems of fatigue in MS first of all are similar to somatic and neurological problems, but from the point of view of social paradigm – person's fatigue problems deal with effective social participation and social involvement. Fatigue as a certain person's inwardly status is closely connected with emotional self-feeling and hopefully could be managed applying art education. Subjective understanding of signs of fatigue and its management reveals ways of specific educational activities of adults with MS that are directly pointed to the reducing sense of fatigue and increasing quality of social participation.

**Key words:** *Patients with MS, fatigue, management and reduction of signs of fatigue, art based activities.*

## **Introduction**

Multiple sclerosis (MS) 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 behaviour models (Diekamp & Kalt, 2000; Blaney & Lowe-Strong, 2009) that lead to the problems in the activities of social participation.

Fatigue is one of the most significant symptoms that directly affect person's social participation. Understanding own situation that is conditioned by sense of fatigue patients often experience emotional fall that leads to more serious conditions: anxiety or depression, feeling of weariness or lack of energy, anger, frustration and hopelessness, withdrawal from social participation.

All spheres of everyday life are affected by fatigue and are evident in the lack of communication with outside environment. Communication is a complex phenomenon in which psychical, motor, cognitive, speech activities are involved (Malchiodi, 2006; Zull, 2002, Beversdorf, White, Cheever, Hughes, & Bornstein, 2002), therefore, externally signs

of fatigue most of all are observable in the process of communication. Perception of speech, understanding of social interaction and situation, the content of information are the main requirements for social participation and public activities. That is why life quality of patient due to the sense of fatigue suffers significantly. Sense of fatigue associated with MS differs from normal tiredness. Fatigue that is typical to MS requires physical and mental efforts, but the feeling of tiredness is much stronger than would normally be expected (Cafarelli, 2002). Due to extremely unstable balance of energy and of dissipation, mental functions are affected by fatigue as well (Renom, Nota, Martinell, Gustafsson, Warinowski, & Rosa Terré, 2007).

Depending on the area of educational focus, art can facilitate a variety of goals: physical and occupational goals (improving motor skills); cognitive goals (improvement of memory, prioritization, planning, organization); psychosocial goals (improving interpersonal skills, expression of feelings); emotional goals (improving impaired control, easing anxiety, easing depression from feelings of loss, loneliness, guilt, and frustration) (Art Therapy — History & Philosophy).

Individuals can try to prevent fatigue by using effective relaxation techniques. Attempts to manage signs of fatigue and to influence fatigue changes in dimensions of communication in patients with MS applying art education, based on the positive emotional experience could be successful. Art education could serve as a form and precondition of social integration and as a form of reduction of fatigue as well.

According to Thomas, Thomas, Hillier, Galvin, & Barker (2006) the diversity of interventions indicates that there are many ways that can potentially help people with MS. That is why no definite educational technique can be assessed as the best one. However, there is reasonable evidence that art education approaches are beneficial in the treatment of depression, anxiety and in helping people adjust to, and cope with, having MS. It means that MS process has negative impact on the maintenance of a positive quality of life and psychosocial well-being.

Neuroscience points that during learning process the brain physically changes, having positive emotional background. Emotions arise and come into play due to modification of adrenalin, serotonin, and dopamine in synapses. The misbalance of hormone in MS is mentioned by many researchers (Pall, 2001; Pall, & Satterlee, 2001; Richards, Roberts, Mathers, Dunstan, McGregor, & Butt, 2000; ), and it presupposes the idea that art education on people with MS could actuate positive changes in production of hormones that are significant for cognitive activities. Modelling incoming signals from outside in the brain is inwardness of learning. To seek any results person must show some intensity of effort and focus for learning. Art engaging individual's state emotionally, also changes functioning of the brain activity (Zull, 2002).

Working with people suffering from MS, supportive relationship between person and educator is highly significant to guide the art-making experience and to help the individual to find meaning through it along the way, as well as to give personal meaning to the art product that could help to sense and name a problem (Barry, & Enoka, 2007; Buchalter, 2004; Malchiodi, 2003; Malchiodi, 2006). 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 (Fox, & Goodheart, 2001). 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 of abilities, changing person's point of view solving personal interaction problems.

**Object of the research:** Changes in reducing signs of fatigue in patients with MS applying methods of art education.

**Aim of the research:** To reveal the changes in the reduction signs of fatigue in patients with MS applying art education.

**Extent of the research:** 46 women with MS from Šiauliai County (4 regions) from 36 to 52 years of age.

### Methodology of the research

As a theoretical background of analyzing changes in reducing signs of fatigue applying art education lays a *central governor model* designed by Noakes (Thomas, Thomas, Hillier, Galvin, & Barker, 2006). According to this model the brain, experiencing the overstretching, sets off a series of sensations that the body translates them as symptoms of fatigue. The brain does so to protect itself. The main function of the brain is to make sure that person does not get into trouble in whatever exercise he/she is doing. Positive emotions reduce sense of fatigue through neuro-endocrinal system – so person without extended stress can participate in social activities.

Other methodological issue that helps to understand and shape activity in persons with MS is *health believe model* that attempts to explain and predict health behaviours. This is done by focusing on the attitudes and beliefs of individuals and *theory of planned behaviour* (Glanz, Rimer, & Lewis, 2002), as well. Issues of *theory of Reasoned Action* suggest that a person's behaviour is determined by his/her intention to perform the behaviour and that this intention is, in turn, a function of his/her attitude towards the behaviour and his/her subjective norm, and it has been taken into account as well. The best predictor of behaviour is intention. Intention is the cognitive representation of a person's readiness to perform a given behaviour, and it is considered to be the immediate antecedent of behaviour. This intention is determined by three things: their attitude towards the specific behaviour, their subjective norms and their perceived behavioural control (Aronson, Wilson, & Akert, 2003). Activities of certain art forms in the process were not so important, because the main focus was paid to the changes of fatigue characteristics in general. In this research art based education forms were decoupage and elements of moving therapy. It must be mentioned that there were no therapeutic interventions, as it is usual in such type of sessions.

### Methods used in the research

1. Analysis of scientific studies concerning art education as a method of changing psychosocial conditions of patients with MS.

2. Qualitative research, using method of interview was done with the view to assess personal changes in the main characteristics of social participations after the sessions of art education. Structured interview was conditionally divided into three areas:

- a) self-feeling while participating in the sessions of art education;
- b) personally needed help that might encourage social participation;
- c) subjective overview on managing signs of fatigue.

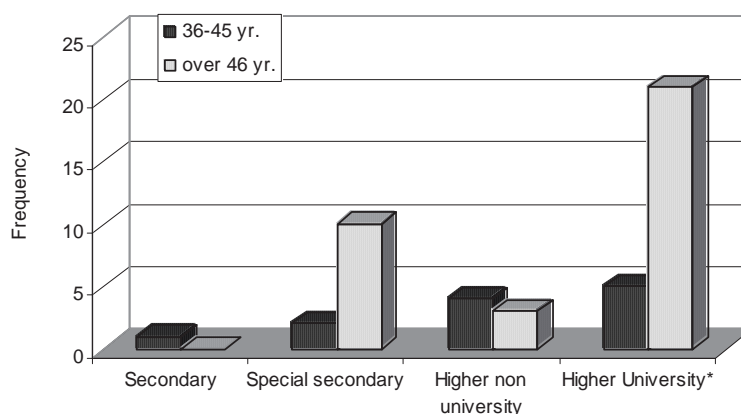
The empiric data of the research was processed applying *method of content analysis* excluding semantic categories that reflects application of art education in the management and reduction of signs of fatigue in women with MS diagnosis.

3. Methods of statistic description were used describing demographic characteristics of the participants of the research.

### Analysis of the research data

**Characteristic of participants.** Changes of sense of fatigue in patients with MS using art education were tested according to the aspects of the level of education, and marital status. Research was done with volunteers who are included in the list of permanent observation of neurologist in the health care centres of Šiauliai County. 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.

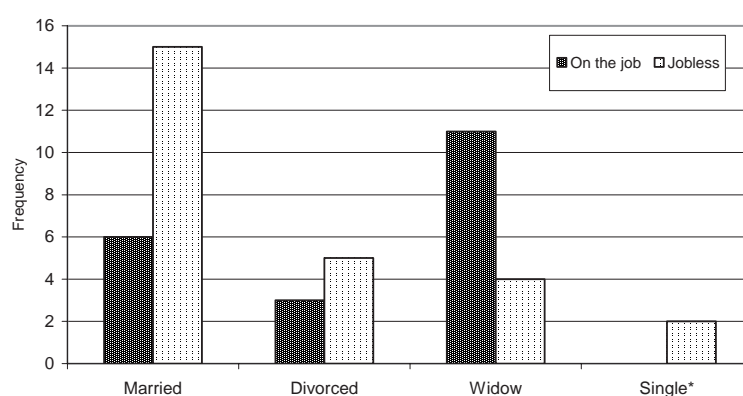
According to the research data it was found out that in the most cases it was women with higher university education over 46 years of age (Fig.1). It is not typical talking about all general set, but it is typical, that educated women are more active and motivated in any kind of social participation. The fact that younger women are not so involved in the social activities could be conditioned of their lack of information, low self-confidence or motivation. It looks to be true, that elder women are educated more and it means that level of education corresponds to the level of social participation. This fact supports some ideas about fatigue control in group of women with MS. Having longer period of disease they are more effective in managing sense of fatigue and know more about their individual reactions on environmental influences.



\*level of statistic significance  $p = 0,05$

Fig. 1. Women suffering MS according to their level of education

Talking about marital status of women, the premise could be made, that it could be connected with experience controlling sense of fatigue (Fig. 2). Analyzing demographic data, it was found out that the largest number of women that live in marriage are jobless. It means that they could have some support from other family members. The fact that widows make the largest number of employed women shows their social activeness and at the same time attempts to keep appropriate level of life quality. Divorced and single women are motivated insufficiently to participate in social activities. Maybe due to the psycho emotional reasons, to the limited contacts with outside environment they tend to withdraw from activities that suggest common participation. The premise could 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.



\*level of statistic significance  $p = 0,02$

Fig. 2. Women's suffering from MS employment according to marital status

### Assessment of subjective changes of self-feeling while participating in the art education sessions

This part presents research data of qualitative research, revealing the impact of art education on personal self-feeling of patients with MS. The development of fatigue is characterized by an initial, disproportionate increase in the perception of effort required to maintain or increase the work output before the inability to exert the required force is experienced (Cafarelli, 2002).

There are two forms of fatigue in multiple sclerosis – mental and physical. Both of them have a negative influence on developing communication skills that ensure process of social participation. That is why opinion of patients must be analyzed together with objective data of research in order to better understand management of MS signs.

Mental fatigue usually follows a daily pattern and, in this respect, differs from the constant fatigue associated with depression. Participation in the art education activities revealed (table 1) self-feeling changes in women mood, motivation and involvement into common social activities.

Table 1

Self-feeling while participating in the sessions of art education

Category	Statement	Rate of statement
Sense of belonging	“I was not alone”; “to work together is better”; “others also try to make pictures for the first time”; “we were doing the same things”; “all the time we were in close relationship”	26
Lack of certain experience	“I’ve never done such things”; “My friend told me how to decorate”; “I have no experience in making beautiful things”; “during the first lessons it was hard”.	21
Interest	“I read more about moving therapy at home”; “I ask to tell more about materials used in decoupage”; “it will be my hobby in future”; “it would be nice to continue these sessions next year”	19
Problems with concentration	“to keep attention during decoupage”; “it is hard to keep sequence of works”; “all the time I was asking colleague what to do next”; “it’s hard to start”; “miss steps in making picture”	19
Relax	“I felt relaxed”; “good time spent together”; “friendly and stimulating activity”; “time goes very fast in lessons”; “I feel very quiet”	18
Uncertainty	“I was not sure, that this activity was for me”; “I was afraid of failure”; “they are professionals, and I start only now”; “it was a question for me, how I’ll get to these sessions”	17

Analyzing changes of the self-feeling while participating in the sessions of art education six categories have been identified: sense of belonging; lack of certain experience; interest; problems with concentration, relax, and uncertainty. The large range of experiences have been noticed, that reflects respondents’ attitude to the art education sessions, to the environment and own relation with the whole process. According to the identified categories, some premises could be drawn out. First of all it shows the level and quality of organized activities, and the positive input on the personal self-feeling of women. It was revealed that *sense of belonging* has a largest rate of statements (26 statements). It means that common activities in the close, safe environment is the first condition to develop general social skills such as communication and at the same time emotionally acceptable environment creates opportunity to manage sense of fatigue.

During the sessions *lack of experience* in art activities has been mentioned too (21 statements). Women came to gain some skills, to experience new proficiency and were open to these challenges. Self-criticism and adequate evaluation of the situation provokes many feelings, both positive and negative. *Interest* (19 statements) and at the same time experienced *problems of concentration* (19 statements) can be assessed as motivation for proposed activities. The fact that women attended all the sessions shows their attempts to master fatigue and to keep in active state. The prevailing of positive emotions indicates category of *relax* (18 statements). “I felt relaxed”; “friendly and stimulating activity”; “I feel very quiet” – statements that prove absence of fatigue. Moreover, reducing sense of fatigue was one of indications to organize sessions of art education for the women with MS.

A few statements indicating *uncertainty* (17 statements), as self-feeling while participating in the sessions of art education were mentioned as well. As it has been realized, this category cannot be equated with the category of lack of experience. Uncertainty is mostly associated with the inner emotional experiences indicating some kind of conflict between people and environment. Lack of experience reflects the level of person’s knowledge, skills, abilities and it is equivalent to the situation or task.

The most significant self-feeling while participating in the sessions of art education was sense of belonging that indicates developing skills of communication as well.

Personal need in help that might encourage social participation is one of main pre-conditions for feeling safe, good and self-confident. These are characteristics that are highly needed for social participation and effective communication. Analyzing research data (table 2) it was found out that main category that encourages person for social activity is *family support* (25 statements). It means, that social workers, social educators, other specialists are not so important involving women into social activities. Firstly, women’s nature tends to serve for family and with family and secondly, women trust the family members more than other strangers. This fact provokes discussion what to do and how ensure women with MS to feel more self-confident and be open to meet outside support. Category of *family support* could be analyzed in the context of other defined category – *accompanying* (20 statements). It means, that in any case women feel safe while being with and accompanied by the members of family. On the other hand, it shows great problems in self-identification, and self-confidence. These characteristics are common to the most social risk groups. Developing communication skills these problems partly could be solved. This fact can be proved by other identified categories analyzing the need of personal help that encourages social participation of women with MS. Meeting *needs of information* (17 statements), *education* (11 statements) and *individualized activities* (14 statements) many problems concerning personal development could be changed. Increasing social experience and contacts could motivate women (because it was indicated as a need) for activity, developing communication skills and openness for environment.

Category of *Societal attitudes* (15 statements) was the one which could determine women with MS reserve and avoidance of social participation. It happens because people know little about symptoms of the disease; they could be affected by the common societal stereotypes associated with concept “different” (“they think that I’m drunk”; it’s troublesome to feel different”, etc.). Therefore, analyzing data it has been revealed that process of integration and involvement in social activities must be performed from both sides.

Analyzing research data on the subjective overview on managing signs of fatigue (table 3) it was found that it is important to keep in mind individual characteristics of the women and that process cannot be organized as strict and exact process. Education activity is effective when it is organized flexibly, orientated not to the result, but to the process. Respondents are actively involved into education, but they hold course of events by themselves independently. In such situation relations and mutual understanding with educators must be highly close and trustful.

Table 2

## Personal need in help that might encourage social participation

Category	Statements	Frequency
Family support	“encouragement of husband”; “family support in studies”; “to share housework and have more time for myself”; “to have common hobby”; “to talk about my problems with family”	25
Accompanying	“somebody should be near”; “I’m afraid to go alone”; “Without accompanying – nowhere”; “I want to go with friends”; “usually I need assistance outside home”	20
Information	“more information about events”; “I want to study, but where?”; “social workers could inform us”; “we can share information on the web site...”; “I ask for all information needed in the meetings of our organization”; “nobody gives information to me”	17
Societal attitudes	“it is complicated to attend public celebrations”; “they think that I’m drunk”; “no benches for short rest”; “nobody invites me”; “it is hard for them to take care of me”; “it is a shame to explain that I have problems with toileting”; “it’s troublesome to feel different”	15
Individualization of activities	“I think that events could be differentiated”; “I like close, private meetings”; “it’s difficult to be in crowd”; “I want to meet the same as me”; “not everything is suitable for me”; “short lessons”	14
Education	“I have only finished secondary school”; “to study in college”; “this year I will try to continue studies”; “I want to study..but my sickness”; “my hope is to study at university”; “regrettably, I have no education”	11

Table 3

## Subjective overview on managing signs of fatigue

Category	Statements	Frequency
Motivation	“I’m so involved, that for the moment I forget everything”; “I hope to find new things, activities”; “interesting to follow up how we are getting better and better”; “surprise for my family let me feel good”	21
Withdrawal from thoughts about disease	“new things let me forget fatigue”; “try to forget how I’ll feel after some hours”; “it’s enough time to think about fatigue sitting at home”; “there are many people who are in the worse situation”; “I’ve just forgotten”	18
Changing type of activity	“after some time I’m going to prepare tea”; “doing works at home I change them, as well as here”; “during break I’m looking what is going on”; “I like to chatter by phone”; “when it’s boring I ask for a break”	17
Patience	“try to be more patient”; “patience and high spirit help to go on”; “it’s not unusual to feel bad”; “every day the same”	16
Difficulties in fatigue management	“doesn’t work”; “it’s no chance to feel better”; “everything goes on its own way”; “I never succeeded to work on myself”; “all attempts are temporal”; “it is an illness and nothing to do about it”; “I can do tasks of the same type for a half an hour, and that’s all”	16
Managing work activity	“I’m working according to my wish”; “to stop for some time”; “I miss some tasks”; “to evaluate one’s health”; “I’m doing long breaks”; “I tried to choose easier way”; “We share tasks with colleagues”; “ask teacher for a break”	15

Against all odds, *motivation* is one of significant criterion to master fatigue (21 statements). It seems that it can be talked about reducing mental fatigue. Barry, & Enoka, (2007) indicate, that patients feel fine during the first few hours of the day but, by afternoon

or early evening they feel completely exhausted. Often a nap or a short period of rest will help them recover. The sessions take place in afternoon time, so sense of motivation works as stimulation and measure to decrease fatigue (e.g. “I’m so involved, that for the moment I forget everything”, “surprise for my family let me feel good”, etc.). It has been found out that art education sessions help to *withdraw from the thoughts about disease* (18 statements). Women do not purposely try to forget health and psychological problems, this happens through their participation in education sessions. It means that common, but highly individualized work can be assessed as emotional strengthening and educational curing (being together they feel better).

Categories *changing type of activity* (17 statements) and *managing work activity* (15 statements) indicate two aspects of fatigue management: interior and exterior. Changing type of the activity means that even being tired, women are not going to change environment – they try to choose activity in the same place, with the same people. Managing work activity means that women could act independently. They are responsible for their decision even to go out of activity, or to organize the work themselves (missing tasks, doing them more easily, etc.). Resting usually helps and many tasks can be completed if broken down into little bits with frequent rests in between.

Participation in art education activities requires a lot of energy, concentration and time. This is proved by other category – *Patience* (16 statements). During long time women with MS get used to feel symptoms of the disease, so patience is like everyday state. Nevertheless, attending art education sessions certifies that motivation plays a significant role that induces them to continue chosen activity, having satisfaction from doing art and communicating with others. It shows that not all women with MS could hide fatigue, other symptoms of the disease, but their self-determination for social activities could be assessed as positive input on patient’s involvement into social participation.

The last category defined is *difficulties in fatigue management* (16 statements). Rather large rate of statements indicates that even being in the remission period they face with reality that limits their activity, sometimes leads to negative emotional experience and breaks health. Such kind of subjective overview on managing signs of fatigue shows that together with art education, professional support of health educator or psychologist must be provided, as well. Some answers (“doesn’t work”; “it’s no chance to feel better”; “I never succeeded to work on myself”; “all attempts are temporal”) can be understood as conditions being close to depression, although Blaney, & Lowe-Strong (2009), Thomas, Thomas, Hiller, Galvin, & Baker, (2006) assume that depression and fatigue do not correlate very well in multiple sclerosis.

Summarizing the research results of subjective changes of self-feeling while participating in the art education sessions it can be stated that art education works as a stimulating, motivating and relaxing factor.

### Conclusions

1. Situations that exclude (or partly exclude) MS persons from usual social activities, that give them self-satisfaction, create state of despair and feeling of loneliness, define communication disorders in interacting with environment.

2. Development of communication skills and overcoming sense of fatigue have been analyzed according to the self-feeling while participating in the sessions of art education; personal needs that help to encourage social participation and subjective overview on managing signs of fatigue.

3. Important factors of self-feeling while participating in the sessions of art education were: sense of belonging, lack of certain experience; interest, problems with concentration, sense of relax and uncertainty.



4. Assessment of personally needed help encouraging social participation is revealed through: family support, accompanying, information, societal attitudes, individualization of activities and education.

5. Subjective overview on managing signs of fatigue could be realized by motivation for activity, withdrawal from thoughts about the disease, changing the type of activity, patience, managing work activity.

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