

## Art on Prescription

### Dutch Performing Arts Medicine Association (NVDMG) Symposium, Leeuwarden, The Netherlands, October 29, 2019

The focus of the symposium, organized by the Rehabilitation Expertise Center for Music & Dance of Revalidatie Friesland (NL) under the auspices of the Dutch Performing Arts Medicine Association (NVDMG), was the added value of the application of art in health care and the social domain. The abstracts of the presentations provide information about different aspects related to this topic. The symposium was combined with an impressive full-length unique dance performance of 80 dancers with Parkinson's disease and their caregivers, under the artistic direction of 'DeDansDivisie.'

The application of arts in medicine is a subject that is closely related to performing arts medicine. The NVDMG wanted to experiment with this field of "arts-medicine" to define the extent of its focus, because there is no formal medical organization for the application of arts in medicine in the Netherlands. The NVDMG strongly supports the application of arts in medicine, in the treatment of performing artists but also in other patient populations.

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#### Introduction

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With healthcare becoming more expensive and as more and more organizations are committed to the concept of "positive health,"<sup>[1]</sup> there is a need to look for innovative ways of providing care. We believe that "art and culture" is a wonderful tool in this respect. With this symposium we want to show professionals in different domains (health care, the arts and policy makers) the added value of using "art and culture" within care. We want to inspire them to think outside the box.

Learning goals:

- Participants gain insight into the effects of dance, music and other art forms on our brains.
- The participants know how "art and culture" can be used in healthcare and what the scientific evidence is for its health benefits.
- The participants gain insight into the possible ways of cooperation between the different domains and what the points for attention are.

- At the end of the symposium, participants can consider within their own field of work how they can use "art and culture."

1. Huber M, et al. How should we define health? *BMJ*. 2011 Jul 26; 343:d4163. <https://doi.org/10.1136/bmj.d4163>

#### 'GeneesKUNST': The Art of Curing

Bas Bloem, PhD, MD

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At first sight, the world of medicine and the world of art and culture could not be more different. Medicine is, almost by definition, rather conservative—just think of the ancient adage *primum non nocere* (first, do no harm)—and its profession is bound by regulations and guidelines. In contrast, art and culture are characterized by creativity, imagination, and liberal thinking, with little formal supervision. Yet it is argued that these two worlds are closely intertwined, perhaps even inseparable. It is stated that a closer collaboration between the two could improve the future of care for our patients.<sup>[1]</sup>

In this presentation the focus is on dopamine, creativity, and Parkinson's disease. It's fascinating that the neurotransmitter dopamine binds both worlds together by its diverse actions: a lack of dopamine leads to debilitating motor and psychiatric symptoms (apathy, depression, anxiety) in patients with Parkinson's, whereas adequate dopamine levels are associated with creativity and art. Dopamine's role in creativity seems causal: when patients with Parkinson's receive dopaminergic medicine to improve their mobility, the treatment also stimulates curiosity, motivation, and even creativity in as many as 10% of patients. Some develop beautiful art, even if their creative intelligence had never expressed itself before. Other patients change their existing artistic expressions under dopaminergic stimulation, sometimes strikingly. Perhaps even more provocative is the recent finding that healthy people who had chosen an artistic profession early in life had a reduced risk of developing Parkinson's disease.

It is explained how arts can help the patient profoundly, e.g., by improving communication, building education and/or empathy.

1. Bloem BR, et al. Art for better health and wellbeing. *BMJ* 2018;363:k5353 <https://doi.org/10.1136/bmj.k5353>

## Older People and Culture: How Does Culture Help Us to be Healthy and Vital?

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Europe is the world's fastest aging continent: one third of Europeans are 65 years or older. This percentage will increase in the years to come and it raises questions. How do we make sure this age group will grow old in a dignified, happy and healthy way? How do we keep health care affordable? And how do we help the elderly stay independent for longer? Finding the answers is an important humanitarian and economic challenge.

The macro-economic question of how we will finance health care and humanitarian questions about quality of life are closely linked because happy people are, on average, healthier and more independent. This co-relation is well founded in science, and so is the relationship between cultural and social activities, and mental and physical vitality. Aging, it appears, has less influence on people who stay actively involved in fascinating, challenging activities. Which aspects of artistic activities make the difference? And to what aspects should one pay attention when offering arts to older people? In this presentation an overview from literature is presented to seek for the answers to these questions by looking at the underlying (neuro)psychological processes. Five characteristics of arts participation are highlighted: the relationship between happiness and health; the positive effect of plural stimulation (motorial, emotional, sensory, social) on older brains; the influence of fascinating activities on declining attention spans; the influence of social cohesion and personal interaction on happiness; and the contribution of meaningful activities to a positive sense of identity.

Older people and arts participation form a golden combination. Even so, people seem to retreat from the arts after retirement. The number of amateurs in music, dance, drama, arts and new media shows a decline for the 65+ year age group over the entire spectrum in the Netherlands: in the 50–64 age group, around 45%, for the 65+ age group it is 35%. This is surprising given the fact that there is an increase in spare time. Older people seem to drop out during a phase in which they have time for arts participation, even though their cognitive development would clearly benefit from it. A similar trend is also visible in other parts of the western world.

### Dance on Prescription

Wya Feenstra, MD

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“Dance on Prescription” is a project in The Netherlands with dance lessons for patients with Parkinson's disease (PD) in dance institutions in Fryslân (a northern province). Dance naturally combines training of physical parameters (cardiorespiratory, strength and flexibility) and

cognitive skills (i.e., double tasks) with social interaction and fun. It also combines different common treatment methods for PD such as cueing, motor variant Lee Silverman Voice Treatment (LSVT BIG), and balance training. In the presentation, an overview is given of the current literature about dance and PD. It is shown that dance is effective in improving motor symptoms (balance, gait and gait related activities) and may be even more effective than traditional forms of physiotherapy. Several studies also mention the potential effects of dance on mental, emotional and social wellbeing. However, less is known about these effects. Therefore a study was linked to the ‘Dance on Prescription’ project to explore the psychosocial effects of dance in patients with PD. This study showed that dance classes affect psychosocial functioning in patients with PD, overall self-esteem and quality of life improved.<sup>[1]</sup>

1. Feenstra W, et al. The effects of dance on people with Parkinson's disease. (Article in progress.)

### Music Medicine: Music Application in Therapy and Therapy for Musicians

Kees Hein Woldendorp, PhD, MD

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This presentation consists of three parts.

**Part 1:** An epidemiological overview of the current situation is presented regarding music medicine internationally, and more specifically the position of the Netherlands in this discipline. It is shown, based on a review of databases, that the Netherlands is rapidly catching up with other countries in the international field of music and dance medicine. The establishment of the NVDMG has certainly contributed to this development. Unfortunately, there is as yet no solid scientific basis for adapted music making, though the initiatives in Great Britain (OHMI) are promising in this respect. In the Netherlands, Maarten Visser, Adams Music Centre, and the rehabilitation center “Revalidatie Friesland” are making progress in this field.

Apart from adapted music making, we use music and dance in our treatment programs at “Revalidatie Friesland.” However, the field of research into the use of music and dance in other areas of medicine is much less clearly defined, with activities being undertaken both inside and outside health care. Here too, the Netherlands seems to be establishing a position internationally.

Dutch rehabilitation medicine is considered to a high standard in international research and clinical practice—the Sidney Light Lecture in 2013 by Prof. Henk Stam gives an overview of the scientific impact of Dutch rehabilitation publications (e.g., in the *Journal of Rehabilitation Medicine*, which is the official journal of the International Society of Physical and Rehabilitation Medicine, 25% of papers published in 2012 came from Sweden or the Netherlands). However, the use of music and dance in (Dutch) rehabilitation medicine is a relative unknown topic; there is currently no overview of what is being done in this area and by whom.

**Part 2:** Some examples are given using music and dance in rehabilitation medicine: on the one hand, the application of music/dance in therapy, and on the other hand, the application of (music/dance and non-music/dance) therapy in injured musicians/dancers.

**Part 3:** The third part included the 40-year history of the rehabilitation center “Revalidatie Friesland” with regard to the aspect of music and dance. A brief survey is presented for the motivation of establishing a Rehabilita-

tion Expertise Centre for Music & Dance focusing on both aspects of music/dance medicine as mentioned in the title of the presentation.

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