

SCIENCE

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The effect of VoetreflexPlus™ (Foot reflex plus) therapy on the quality of life with patients who have a diversity of conditions and complaints

Introduction

In the Netherlands, there are about two-hundred, mostly female, VoetreflexPlus™ therapists, about 10% is male. They have attended a three-year training programme at the training institute Total Health. The average age of the students is between 30 and 40. There is a tendency for students to register at a younger age. Often, the students are nurses who wish to broaden their knowledge with a different vision, therapists who seek an addition to their therapy, and people who are ready for a career switch. VoetreflexPlus™ therapists primarily work in their own practice and their clients are predominantly self-referrals. Only occasionally the clients are referred by doctors. Lately, there is also an increase in the number of employments at care institutions.

In VoetreflexPlus™ therapy it is assumed that the entire body is reflected in the feet. By massaging certain zones in the feet using specific techniques the blood circulation and energy flow in the corresponding area in the body are optimised stimulating the self-healing ability resulting in a possible reduction or disappearance of the complaints. The VoetreflexPlus™ therapy connects the regular western medical vision (based on medical basic knowledge) with western naturopathy and the traditional Chinese philosophy. The used authentic Chinese methodology is clearly distinguishable of other eastern (e.g. Thai) massage techniques. The result is a unity in which the various elements supplement and support each other. This leads to an increased insight in connection to the complaints which according to western understanding are isolated. The treatment always starts with massaging the meridians on the lower legs and feet after which the zones on the feet are treated with western and Chinese massage techniques.

VoetreflexPlus™ therapy is a complementary treatment methodology which is mainly applied to clients with mostly chronic conditions and complaints. According to therapists and clients VoetreflexPlus™ is effective in many cases. However, the scarcely available literature has not been able to either confirm or reject this judgement so far. At PubMed the keywords 'Foot Reflexology' result in a few dozen hits. There is a limited amount of research to the effectiveness of Foot Reflex treatments among the *Systematic review* of J. Lee et al. (2011) and *A systematic review of randomised controlled trials* by E. Ernst (2009).

The purpose of this research is to investigate the effect of VoetreflexPlus™ therapy on the quality of life for the clients with a number of conditions and complaints and if the effect of the therapy is smaller or larger on certain complaints and conditions. The research is executed by research firm Soffos at the request of training institute Total Health (www.totalhealth.eu) in Breda, the Netherlands.

Method

In this outcomes research multicentre pilot study the results have been measured which twenty-six of the students of the education VoetreflexPlus™ achieved in their graduation project in the academic year 2013-2014.

The graduation project is the completion of a three-year training and serves as preparation for their own practice.

In this project they have to demonstrate that they are able to function independently as a therapist.

The essence of the education is that a student is capable of taking a case history using the three different perspectives and translating these to the correct meridians and reflex zones. On the basis of the case history and the information after exploring the foot reflex zones the student has to personally set up an adequate, substantiated treatment plan including the choice for the proper massage techniques after which this plan needs to be executed according to a strict schedule.

As the primary Outcome measure (clinical endpoint) has been chosen for the variable 'Quality of life' to quantify the quality of life the Dutch validated the 'Quality of life' questionnaire: RAND-36 (Van der Zee et al. 1996) has been used. This questionnaire knows a data analysis model in which on basis of the answers per respondent and per category (physical functioning, social functioning, limiting the physical role, limiting the emotional role, mental health, vitality, pain and general perceived health) the quality of life is determined. This score is expressed in a scale of 0 (completely unhealthy) to 100 (completely healthy).

Clients

The research population consisted of 134 test subjects with a diversity of conditions and complaints. In the period of 1 October 2013 up to and including 1 July 2014 all of the 26 therapists have treated at least two and a maximum of 10 test subjects for the research. Every new client, regardless of the clinical picture or the condition, was asked to take part in the research. Of 134 clients filled-in questionnaires have been received. The recruitment

of clients has come about in various ways; 17 clients were related to or befriended with the treating therapist; 51 clients came via third parties; 9 clients enlisted via a doctor, institution or therapist and 49 clients reached the therapist in a different way (patient organisation, forum, own practice).

In the research population were four children in the age group of 0-10 years, two children/adolescents between the 11-20 years old, 47 adults between 21-40 years, 56 adults between 41-60 years and 22 adults between 61-100 years. Three clients have not answered this question.

It consisted of 16 men and 113 women. The other 5 clients have not answered this question.

Highest level of education of the clients: 1 child is still in primary school, 42 children are in junior general secondary education (mavo) or lower secondary vocational education (lbo), 34 senior general secondary education (havo), 11 pre-university education (vwo), 11 senior secondary vocational courses (MBO), 6 higher professional education and 1 university level. Twenty-eight clients have not answered this question.

Procedure

The test subjects were asked to fill in the questionnaire 'Quality of Life' twice during the intake; first at the start of the course of treatment and then at the end of the treatment. Ten clients have not filled in the second questionnaire of which three stopped before the end of the course of treatment. There were also clients who did not complete the questionnaire correctly. The reasons for the clients to stop the treatment early were: not having the time and not feeling well during the treatment. The remaining 107 clients together have had an average of 7.1 VoetreflexPlus™ treatments.

Twenty-five therapists have chosen to give their clients supportive advice. Twenty-four times, the clients have followed the advice. On top of that it was indicated that one or more of the clients did not follow the advice (sufficiently) more or less twelve times. The pieces of advice vary from applying acupressure, supplements, food and movement for relaxation. One therapist indicated that he had not provided any supportive advice.

To the RAND-36 questionnaire a question was added about the complaint with which the client reported to the VoetreflexPlus™ therapist. The research firm categorised the complaints in 16 categories of conditions and complaints. The test subjects could report multiple conditions. All test subjects received a series of VoetreflexPlus™ treatments after the intake and anamnesis. The amount and the frequency of the necessary sessions were in the discretion of the therapist in consultation with the client. The average duration of the treatment per client was one hour per treatment.

Results and discussion

The 16 categories in which the clients could report their conditions/complaints are *Allergy*, among which hay fever (n=19), *Bladder & kidneys* (n=10), *locomotor apparatus*, among others: overweight, pelvic instability, polyarthrosis, restless legs and lower back complaints (n=33), *Central nerve system*, among which Parkinson disease, migraine and MS (n=18), *Intestines* (n=24), *Gynaecology*, among others: menstruation problems with PCO, mood swings during the menopause and sleeping after childbirth (n=25), *Skin* (n=7), *Throat, nose, ears and eyes*, among which hay fever (n=11), *Airways* (n=3), *Liver & Gallbladder* (n=9), *Stomach* (n=8), *Psychological complaints* among which: self-confidence (n=19), *Metabolism*, among which: diabetes type II, regulating the blood glucose (n=10), *Other complaints*, such as: overweight, restless legs, glandular fever, ADHD and insomnia (n=90). There was no limitation to the number of conditions and complaints on which a client could score.

Seriousness of the complaints in % at moment 1	Seriousness of the complaints in % at moment 2	Change in % between T1 and T2	Significant change?	The client was asked how much the complaint or condition bothered him.	
Locomotor apparatus	59	36	23	Yes (p=0.001)	After receiving the questionnaire at moment 2 it was determined what the seriousness of the addressed complaints was at that time, how significant the change was and if this was statistically significant.
Intestines	47	30	17	Yes (p=0.008)	
Gynaecology	63	41	21	Yes (p=0.040)	
Endocrine system	59	39	20	Yes (p=0.000)	
Throat, nose, ears and eyes	41	18	23	Yes (p=0.010)	
Psychological complaints	58	29	29	Yes (p=0.000)	
Other complaints	58	37	21	Yes (p=0.000)	

The scheme above shows only the significant changes.

The RAND-36 distinguishes the following dimensions: Mental health, Freedom of pain, Physical functioning, Emotional functioning, Health change, General perceived health status, Social functioning, Vitality. The dimension 'Emotional functioning' represents the functional limitation due to emotional problems. 'Mental health' means mental well-being, this contains questions on feelings like depression and nervousness.

On average, the scores have improved significantly on all dimensions for all 107 clients except for the dimensions 'Pain freedom' and 'Social functioning'.

The dimension 'Mental health' has improved most, namely 14% points. 'Vitality', 'Physical functioning' and 'General perceived health status' come in on a good second place with 12% points. 'Emotional functioning' is a close third with 11%.

'Pain freedom' has not changed, in other words on average these 107 clients still experience the same amount of pain as before the treatments with VoetreflexPlus™ therapy. Individual clients could of course have improved or worsened on pain freedom.

As not all clients improve to the same amount the percentage of clients that has indicated whether the different dimensions of the Quality of life questionnaire has worsened, improved or remained the same have been taken into account. In six dimensions more clients have indicated to have improved instead of worsened. On 'Pain freedom' approximately the same amount of clients have remained consistent (35% of the clients) or improved (36% of the clients), only the dimension 'Social functioning' has a lower percentage of clients that has improved (37% of the clients) in comparison to the number of clients that have worsened (45% of the clients).

Results with clients with complaints and conditions to the locomotor apparatus.

As the group of clients with complaints and conditions to the locomotor apparatus is relatively large within the population of clients in this research and because many complaints and conditions to the locomotor apparatus receive insufficient treatment in the regular field, we have highlighted this group of clients.

There are 33 clients who have indicated to be bothered by their locomotor apparatus. On top of that, 17 clients in the category 'Other complaints' have mentioned pelvic symptoms, lower back complaints and wear of the vertebrae. Clients often find it difficult to estimate whether their complaints or conditions belong to a certain main category and then they list their complaint or condition also under 'Other'. The 33 clients who scored locomotor apparatus under the mentioned complaint/condition in the questionnaire improved on average 23% points due to the treatments. The 17 clients who registered their complaints and conditions under 'Other complaints' have on average improved 40% points after the VoetreflexPlus™ treatments.

Interesting is that these clients with specific complaints to the locomotor apparatus have improved more on the 'Quality of Life' dimensions than the entire group of 107 clients except for two exemptions. They have improved less on 'Health change' and 'General perceived health status'.

VoetreflexPlus™ and other treatments in the past three months

Twenty-two clients indicated on filling in the first questionnaire that they have also received (an) other treatment(s) in the prior three months; physiotherapy and medication were mentioned most often. Eighty-five clients did not indicate to have received other treatments in this period.

Conclusion and discussion

The 107 clients who have been treated by the third-year students of the education of Total Health VoetreflexPlus™ and who have filled in the Quality of Life questionnaire twice 306 complaints and conditions have been mentioned. The results with this group indicate that the therapy leads to a significant improvement with a number of complaints. Some comments are in place. For some of the mentioned complaints and conditions it appears to be difficult for clients to estimate to what main category the condition or complaint belongs, e.g. glandular fever, ADHD, menstruation problems with PCO and mood swings during menopause. The research has been limited to two measuring moments. So it is unknown for what period of time the improvement lasts. It would be a meaningful follow-up research to more specifically monitor clients with mobility problems in the period they make use of the VoetreflexPlus™ therapy. Will these clients also lessen their use of other therapies as medication and physiotherapy? If this is the case, this research could also be interesting for those who bear the costs. Besides more research in the field of mobility complaints and VoetreflexPlus™ therapy it is also advisable to monitor more clients with a diversity of complaints so it will become more visible what VoetreflexPlus™ therapy can mean for larger groups of clients with various complaints and conditions. In follow-up research it seems useful to spend more attention to the costs aspects of the treatments in view of the societal demand to save costs in health care. What costs are being made by clients who undergo the VoetreflexPlus™ treatment with a diversity of conditions and what costs are being made by clients who undergo other treatments? In the research no placebo group has been measured as this is rather difficult. People will directly experience massage treatments. The application of a regular massage, not being a specific VoetreflexPlus™ treatment, could be used as a check to clarify which added effects can be accomplished with this specific VoetreflexPlus™ treatment.

Client case I

Cor has had back pains on a daily basis for thirty years. The pain is at the height of lumbar two and three. The pain is present as of waking up in the morning and on a scale of 1 to 10 it scores an 8. In 1986 this led to a declaration of state of permanent incapacity for work. Then the diagnosis came that his vertebrae were worn due to the physically strenuous work he performed as a steel bender. The orthopaedic surgeon has given him injections with probably corticosteroids but this had not resulted in improvement. The surgeon was not willing to perform surgery as the risk for damage to the nerves would be too significant. Therefore a corset was fitted which he could use every now and then to ease the pain. Eventually he did not use this for a long period of time. Cor has undergone seven VoetreflexPlus™ treatments after which the pain has reduced to 0. He experienced the first treatment as quite painful. The pain in the back increased the day after but in the days after that the pain substantially lessened. After three treatments he was capable to get out of bed without any pain. The pain during the day changed from severe to nagging. After the sixth treatment the back pain had completely disappeared. As

a side effect he has more energy and feels relaxed and calm. However the pain has gradually been returning a year after the last treatment.

Client case 2

Maite, a nine-year old girl, has been redirected to a child psychiatrist by her teacher. He diagnosed her with an extreme low level of self-confidence. Maite is getting picked on at school, she is being excluded. Her energy level before the treatments scored a 3 on a scale of 0 to 10. On top of that she was bothered by obstipation, mental unrest and she had trouble sleeping. At first her fatigue increased. After the third treatment she fell asleep faster. After the fourth massage she started to open up about the things she had experienced. After the fifth massage her parents noticed that she also dared to say no. She dared to stand up for herself. Her energy level steadily increased. After the sixth massage she no longer needed her mother near, she dared to do things on her own. She has become increasingly happy and active. The energy level received a 9 after the seventh massage. There has been feedback with Maite's teacher. She was surprised by the positive behaviour modification she saw with Maite. She was very content with this result.

Client case 3

Lisan, a woman of 17 years old, is under treatment with a paediatrician and a dietician. Lisan has a low self-esteem, is bothered by an eating disorder and mentions that she has poor contact with her parents. The first three treatments she indicated to feel more comfortable. After the fourth massage she felt that she had reached a turning point. She felt happier, more active and she ate more. However, when after some time she noticed that she had gained one kilogram, it made her feel bad. Emotionally she is back to where she started from. The only positive aspect is that her energy level is higher than before the massage treatments. Her energy level has increased from a 5 to a 7. Together with Lisan there has been a conversation with her GP. Who concluded that the results were visible but due to the consequences of her low self-esteem and her eating disorder she will need a long-term treatment. He believes that the VoetreflexPlus therapy can be a fitting complement.

Summary

Introduction: The VoetreflexPlus™ treatment seems a therapy with excellent treatment options for a diversity of complaints and conditions. This therapy form is a combination of western and Chinese massage techniques offered by the education centre Total Health.

Method: With the RAND-36 questionnaire the change in the perceived quality of life of the client has been established prior to the first and after the last treatment with the VoetreflexPlus™ therapy. The RAND-36 has been complemented by questions about complaints and conditions for which the clients searched treatment. 107 clients filled in the questionnaire before as well as after the treatments.

Results: Significant improvements have among others been measured with complaints to the locomotor apparatus, the intestines, gynaecology, the endocrine system, throat, nose, ears and eyes and with psychological complaints. Measured on the dimensions of the RAND-36 mental health, physical functioning, emotional functioning, health change, general perceived health status and vitality have improved significantly.

Conclusions: With a number of pathologies, which normally have less profit to be gained, the VoetreflexPlus™ treatment offers so much profit in this group of 107 clients that follow-up research will certainly be worthwhile for looking deeper into certain conditions.