The Use and Evaluation of Haptotherapy by Cancer Patients
Adriaan Visser, PhD, health psychologist; PRO-health.org, Rotterdam, the Netherlands

Abstract

Objective
To describe the use and evaluation of haptotherapy in a Dutch psycho-oncological center.

Research questions
(a) How many cancer patients are referred to haptotherapy? (b) Which social and medical background characteristics influence the choice for haptotherapy? (c) How do patients evaluate the haptotherapy they received? and (d) Do patient background characteristics influence the evaluation of the haptotherapy?

Method
An historical cohort study, re-analyzing patient-reported outcomes in the annual evaluation reports between 2007 and 2015 from the psychosocial oncology center, De Vruchtenburg, in Rotterdam, the Netherlands. The use of haptotherapy was measured by direct questions to the clients. and checked with the client registration files. Satisfaction was measured on a scale from 0 to 10. Measured background characteristics were gender, age, education level, number of years suffering from cancer, and the medical condition of the patients.

Results
Of the 1202 clients seen during the years 2007 to 2015, 12% was referred to haptotherapy. Satisfaction varies during these years from 7.3 to 8.5 (with a mean of 8.1). Compared to other forms of therapy the haptotherapy satisfaction scores are quite high. Most of the background characteristics do not influence the choice nor the satisfaction of the clients. However, it are primarily clients who are not very ill who use the haptotherapy.

Conclusion
Haptotherapy is used less because of the limited capacity of therapists and the increased likelihood that haptotherapy may not be eligible for healthcare coverage. The generalization is small due to the missing numbers, as well as the fact that the data are only available from one psycho-social cancer institute.

Keywords: Haptotherapy, evaluation, cancer, psychosocial support, patient characteristics

Introduction
For most of the Dutch patients, cancer causes physical, psychic, social and meaning of life problems, which may also hold true for the related family as well [De Haes et al. 2001]. Appropriate care for patients with cancer not only focuses on medical treatment, but also on preserving their well-being and quality of life. Cancer patients often turn to supportive psychosocial care, such as psychotherapy, massage, haptotherapy, creative therapy, music therapy, and life style interventions, such as diet [Garssen et al, 2011; Sprangers et al. 2001; Schell et al. 2003; Visser et al. 2000]. Research into the effects of mind-body approaches, e.g. massage and haptotherapy shows positive effects on the levels of fear, pain, stress, nausea, and quality of life experienced by patients [Garssen et al. 2011; Van ’t Spijker et al. 1997].

In this article, we will describe the use and evaluation of haptotherapy as a part of psychosocial care for people with cancer. Haptotherapy is a form of complementary care wherein touch is a central element. Touch is very important for many patients with cancer because these patients are often not touched intentionally, but only instrumentally during their illness and treatment [Schell et al. 2003]. Touch is a basic human need which contributes essentially to the well-being. In haptotherapy, patients are taught to connect with their feelings and from there they learn how to deal with their illness, with themselves and with the world around them in a better way. This can lead to a reduction in symptoms and
an improvement in quality of life [Van den Berg et al. 2006; Schell et al. 2003]. Haptotherapy can be especially helpful for cancer patients, since they are undergoing invasive treatments like surgery and chemotherapy that can have a serious impact on their physical functioning, body awareness and self-image.

*Through haptotherapy I learned to recognize the boundaries of my fatigue. The haptotherapy helped me to become more in touch with myself again. I learned to accept the illness and how to cope with that.*

In the study, we explored the use and evaluation of haptotherapeutic treatment for people with cancer. There are no further data available on the use and evaluation of research into haptotherapy for cancer patients, neither from publication databases (Pubmed and Psychlit) nor from the Dutch Association of Haptotherapy.

**Research questions**

We reported descriptive data about the use and evaluation of haptotherapy. There are a few studies about the effects of haptotherapy for cancer patients [Van den Berg et al. 2006; Schell et al. 2003]. This are effect studies in a few institutes, based on a limited number of clients.

*Note 1. The cursive quotes are based on the questionnaire distributed among clients [Visser & Wildenbeest, 2012; Vennix et al. 2016].*

There is a lack of descriptive data from larger samples of cancer patients. For this reason we researched the following research questions:

1. How many patients with cancer followed haptotherapy?
2. What is the background of patients who followed haptotherapy with regard to gender, age, education, number of years suffering from cancer, and the medical condition of these patients?
3. How do patients evaluate the haptotherapy received?
4. Do patient background characteristics influence the evaluation of the haptotherapy?

**Methods**

**Data collection**

The study was held at De Vruchtenburg (Rotterdam, the Netherlands), one of the largest psychosocial oncology institutes in the Netherlands [De Vruchtenburg 2011; 2012; 2013]. This centre offers several forms of psychosocial support to patients with cancer and their family members, e.g. individual and group psychotherapy, creative therapy, training in mindfulness, and for several years, haptotherapy. This formal offer of haptotherapy was unique for Dutch psychosocial oncology. Trained and licensed haptotherapists work at De Vruchtenburg. The haptotherapy was offered from 2007 onward. However, since 2014, haptotherapy has not been covered or only partly covered by health care insurers and the national insurance policy [Ministry of Health, Welfare and Sport, 2012; 2015]. This means that patients could no longer be reimbursed for the costs of their haptotherapy.

*Please hire one more haptotherapist. I sometimes had to wait three weeks. During that period, I needed one session every two weeks.*

In addition, the institute published the last annual evaluation report, including the use of haptotherapy, in 2015, due to reorganizations. Therefore, we will report the use and evaluation data on haptotherapy from 2007 until 2015.

**Participation in the therapy**

Clients visited the institute on their own initiative, as well as having been referred by their oncologists or general practitioners. The psychologist responsible proposed a therapy plan, taking the preferences of the patients into account. The chosen therapy then had to be confirmed in a staff meeting.
**Questionnaire**

After finishing their therapy, the clients were invited to fill in a questionnaire. The written questionnaire contains questions about the evaluation of the therapy they followed, the service of De Vruchtenburg in general, and several social and medical characteristics. There were also open questions as part of the survey on use and evaluation of therapies. Where these answers to open questions applied to haptonomy, they are reported below as cursive quotes. The standardized questionnaire was developed, tested and used in a lot of former studies [Garssen et al., 2011; Van den Berg et al., 2006; Schell et al., 2003; Visser & Wildenbeest, 2010].

The evaluation is based on a single item, a scale from 0 to 10, like Dutch school marks are given from 0 to 10, as a standardized measure and also used in many other studies [Visser et al., 2000; Van den Berg et al., 2006]. This means that a five or lower score should be considered as an insufficient, negative evaluation. The questionnaire was sent by post, with a stamped answer envelop. In order to avoid pressuring clients, they did not receive a reminder.

*I didn't expect haptotherapy to include so much talking, which in fact it did.*

**Non-response**

There were reasons not to send a questionnaire to the clients. From the therapists’ standpoint, the patients should not be too ill or should not be psychologically unstable. It was also possible that the clients wished to discontinue the therapy shortly after the intake or after starting the therapy. These clients with only one or two therapeutical sessions were not questioned. In addition to this form of dropout, clients may have also not replied to the questionnaire due to their own perceived psychological and physical condition or they may have forgotten to send back the questionnaire.

**Statistical analysis**

SPSS vs. 12 was used in the statistical analysis [SPSS, 2018]. Descriptive statistics were used for all the studied variables. The relationship between the use and the evaluation of the haptotherapy was analyzed by t-tests or Anova tests, depending on the level of the measured variables; dichotomy or multiple scales like 3 or 4 point scales. The handled p-value as p. < 0.05.

**Results**

The reported data are based on the annual evaluation reports for the years 2007 to 2015 and on two summarized trend reports on the evaluation studies from 2007-2010 and 2011-2015 [Visser and Wildenbeest, 2012; Vennix et al., 2016].

The non-response during these years was the number of patients that was included in the therapy minus the patients that were not able to fill in the questionnaire and minus the number of patient that did not respond. This non-response varied during the years 2007 and 2015 between 75% and 51%, with an average of 68%. The non-responders were excluded from this study.

**Participation rate**

During the last eight years, a total of 124 clients participated in the haptotherapy (see Table1). The highest participation rate was between 2007 till 2012. In total, 12.0% of all clients followed haptotherapy. This is a small part of the whole sample, as compared to the other therapies followed.

*I would really like to have haptotherapy. Given my feelings, it may have helped me more than other therapies.*
Table 1: Number of clients participating in haptotherapy from 2007-2015.

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers</td>
<td>11</td>
<td>9</td>
<td>4</td>
<td>20</td>
<td>22</td>
<td>20</td>
<td>17</td>
<td>10</td>
<td>11</td>
<td>124</td>
</tr>
<tr>
<td>% from total N of clients</td>
<td>22.0%</td>
<td>12.3%</td>
<td>36.4%</td>
<td>26.7%</td>
<td>15.2%</td>
<td>12.3%</td>
<td>8.6%</td>
<td>4.8%</td>
<td>7.1%</td>
<td>12.0%</td>
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</table>

The haptotherapy gave me a lot of peace and I felt very well understood and heard. The therapist was very honest and sincere. The haptotherapy sessions were very valuable for me. I would have liked to receive this therapy more frequently, but that was not possible due to schedules.

Background characteristics

The description of the background characteristics of the clients who followed haptotherapy or another therapy is presented in table 2. This concerns only a part of the whole sample. These measures are missing for the years 2007, 2008 and 2011. It shows that the background characteristics for the clients who followed haptotherapy do not differ from the clients in other therapies. But this is based on a rather small number of clients.

The distribution of the background characteristics for the years 2009, 2020 and 2012-2015 is presented in table 3. The statistical differences are tested for several subsamples due to missing data. For the years 2012-2015 the main trend showed that primarily women followed haptotherapy, with an average age of around 50, with quite a high level of education, and the mean number of months varies between 37 and 44 months. There are no significant differences between the years, except for the prognosis, which shows a significantly lower number of clients with a positive diagnosis in 2014. So, in that year, more severely ill patients followed haptotherapy.

Table 2: Background characteristics of clients following haptotherapy from 2009, 2020 & 2007-2015.

<table>
<thead>
<tr>
<th>Characteristics / Type of therapy</th>
<th>Followed haptotherapy</th>
<th>Other type of therapy</th>
<th>Statistical test</th>
</tr>
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<tbody>
<tr>
<td>Numbers of clients in haptotherapy</td>
<td>11</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>a. gender: male</td>
<td>23%</td>
<td>20%</td>
<td>NS (Chi2)</td>
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<tr>
<td>women</td>
<td>77%</td>
<td>80%</td>
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<tr>
<td>b. age (mean)</td>
<td>54 years</td>
<td>52 years</td>
<td>NS (t-test)</td>
</tr>
<tr>
<td>c. education (scale 1-6)</td>
<td>4.0</td>
<td>4.2</td>
<td>NS (t-test)</td>
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<tr>
<td>d. number of months living with cancer (mean)</td>
<td>Missing</td>
<td>Missing</td>
<td></td>
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<tr>
<td>e. prognosis: positive</td>
<td>56%</td>
<td>44%</td>
<td>NS (Chi2)</td>
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<tr>
<td>negative</td>
<td>60%</td>
<td>40%</td>
<td></td>
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Table 3: Background characteristics in haptotherapy from 2007-2015.

<table>
<thead>
<tr>
<th>Characteristics / Years</th>
<th>2009</th>
<th>2010</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<th>Tests (a)</th>
<th>Tests (b)</th>
<th>Tests (c)</th>
<th>Total number</th>
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<tr>
<td>Numbers clients in haptotherapy.</td>
<td>4</td>
<td>20</td>
<td>20</td>
<td>17</td>
<td>10</td>
<td>11</td>
<td>Chi2</td>
<td>Chi2</td>
<td>Chi2</td>
<td>124</td>
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<tr>
<td>a. gender: men</td>
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<td>Anova</td>
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<td>b. age (mean)</td>
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<td>c. education (scale 1-6)</td>
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<td>d. number of months</td>
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<td>living with cancer (mean)</td>
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<td>Chi2</td>
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<td>e. prognosis: positive</td>
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<td>negative</td>
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<td>Chi2</td>
<td>NS</td>
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(a) statistical tests for the years 2012-2015;  
(b) statistical tests for the years 2009 & 2010;  
(c) statistical tests for the years 2009,2010 & 2012-2015.

Evaluation

Table 4 reviews the evaluation of the several types of therapies followed by the clients. The satisfaction with haptotherapy varies between 8.5 and 7.4 (mean 8.1). Compared to other forms of therapy the haptotherapy scores are rather high, except in 2007, 2010, 2013, and 2015. For 2007, there is the trend that the evaluation of stress reduction therapy is statistically significantly lower (F-toets: F=2.83; p=.07). From 2007 to 2010, the evaluation of the creative therapy is the lowest, but these differences are not statistically significant compared with the other years.

Table 4: Evaluation of haptotherapy and several types of therapy on scale 1-10: means and (SD).

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</thead>
<tbody>
<tr>
<td>Haptotherapy</td>
<td>7.7</td>
<td>8.2</td>
<td>8.5</td>
<td>7.8</td>
<td>8.0</td>
<td>8.2</td>
<td>7.4</td>
<td>8.2</td>
<td>7.3</td>
</tr>
<tr>
<td></td>
<td>(2.4)</td>
<td>(0.6)</td>
<td>(0.6)</td>
<td>(1.9)</td>
<td>(1.1)</td>
<td>(1.1)</td>
<td>(1.7)</td>
<td>(1.4)</td>
<td>(1.9)</td>
</tr>
<tr>
<td>Individual counseling</td>
<td>8.4</td>
<td>8.3</td>
<td>83.5</td>
<td>8.3</td>
<td>7.8</td>
<td>8.1</td>
<td>8.4</td>
<td>8.3</td>
<td>7.8</td>
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<td></td>
<td>(0.8)</td>
<td>(1.3)</td>
<td>(1.1)</td>
<td>(1.1)</td>
<td>(1.9)</td>
<td>(1.4)</td>
<td>(1.2)</td>
<td>(1.2)</td>
<td>(2.0)</td>
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<tr>
<td>Stress reduction training/mindfulness</td>
<td>7.6</td>
<td>8.3</td>
<td>8.3</td>
<td>8.0</td>
<td>7.4</td>
<td>8.1</td>
<td>8.6</td>
<td>8.7</td>
<td>8.3</td>
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<tr>
<td></td>
<td>(1.1)</td>
<td>(0.8)</td>
<td>(0.8)</td>
<td>(0.0)</td>
<td>(1.9)</td>
<td>(1.8)</td>
<td>(1.7)</td>
<td>(1.2)</td>
<td>(1.5)</td>
</tr>
<tr>
<td>Creative therapy/art therapy</td>
<td>7.5</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>8.5</td>
<td>8.1</td>
<td>8.3</td>
<td>8.4</td>
<td>7.8</td>
</tr>
<tr>
<td></td>
<td>(2.4)</td>
<td>(1.5)</td>
<td>(1.2)</td>
<td>(1.7)</td>
<td>(0.09)</td>
<td>(1.4)</td>
<td>(1.4)</td>
<td>(0.09)</td>
<td>(1.9)</td>
</tr>
</tbody>
</table>

Two years ago, I was irritated by the haptotherapy; the therapist was the cause because we were not suited to each other.
In all annual reports since the start of the evaluation study in 2004 we analyzed the influence of client background characteristics on client satisfaction with the therapy followed. The general trend is that most of the background characteristics did not or only marginally influenced client satisfaction, e.g. age, education, gender, type and stage of the care, and the number of years suffering from cancer. This also holds true for the annual evaluations of haptotherapy.

**Discussion and Conclusion**

In a study about the use and evaluation of haptotherapy for cancer patients, we conducted secondary analyses of the data available in the annual evaluation reports of the psychosocial care Institute De Vruchtenburg (Rotterdam, the Netherlands). The annual reports contain information on the number of clients, the type of therapy clients followed, their background characteristics and the evaluation of several aspects of the therapy received. The most complete set of years was 2012 to 2015. This is the only known available Dutch and international study with data about the use and evaluation of haptotherapy for cancer patients.

Only a limited number of clients followed haptotherapy; it is a rather small part (12 %) of the total number of patients that followed therapies at the institute and who also completed the evaluation. The experience with haptotherapy was not only based on the clients’ choice for haptotherapy, but was also strongly influenced by the intake therapists’ view and advice of the appropriate therapy for the patients. This may explain that personal background factors do not strongly influence the choice for haptotherapy. Haptotherapy is generally more frequently followed by female clients. That was especially the case for the years 2009 and 2010.

In one particular factor, the severity of the diagnosis, the data show that clients with a better prognosis will follow haptotherapy more frequently. This is only a significant difference for the year 2014; in that year, more clients with a negative prognosis followed haptotherapy more often. However, the general trend shows that clients who are more ill prefer to follow psychotherapy rather than haptotherapy.

Since the health insurance companies and government legislation in 2014 resulted in lowering the coverage of therapy fees, the inflow of clients in psychosocial care facilities changed in the Rotterdam centre De Vruchtenburg, as compared with clients before 2014 [Visser et al, 2018]. Not only did the inflow of clients decrease by a quarter, but also the satisfaction went down. In addition, more female, elderly patients and more relatives followed the therapies. This held true for all the therapies, including haptotherapy.

The haptotherapeutical treatment offered to the people with cancer is highly valued. Furthermore, the level of satisfaction in this study is higher than the measured satisfaction in other studies on psychosocial care for people with cancer [Garssen et al. 2011; Van ‘t Spijker et al. 1997]. To what extent social desirability accounts for the high satisfaction scores is unknown. This may be especially important in the case of haptotherapy, because the touch by the therapist may be very well appreciated due to the fact that touching for patients with cancer is often very restricted. However, the risk of bias due to social desirability was reduced by collecting the questionnaires through mail rather than by the haptotherapists themselves. Furthermore, it is known from other studies among cancer patients that the satisfaction measures used do not correlate with the social desirability measures [Yang & Visser & Ter Doest, 2010].

A consequence of the yearly small sample sizes is that associations between client characteristics and haptotherapy cannot be proven for the measured evaluation. The statistical power of the possible applied linear regression analysis on the determinants of the evaluation will be low, especially in the logistic regression analysis. Research with larger groups of patients with one type of cancer undergoing the same treatment could further confirm the clinical relevance of the therapy evaluation.

It may be concluded that haptotherapy positively contributes to several indicators of the perceived well-being of patients with cancer during their treatment [Van den Berg et al, 2006; Visser et al. 2011]. However, more rigorous experimental studies are necessary in this field, especially concerning randomization, number of participants, and homogeneity of the samples. Such extended studies would also make it possible to reach more detailed conclusions about the use and evaluation of haptotherapy.

Another restriction of the study is also that the sample has been recruited from only one institute. Haptotherapy is not systematically applied at other Dutch psychosocial cancer institutes, and if so, the evaluation is not measured and not published. This restricts the generalization of the conclusions.
Practice implications
Our study shows that the treatment with haptotherapy satisfies the people with cancer, because it fulfills the need to be intentionally touched during the time cancer patients are suffering from their disease and the, often invasive, treatments. A few studies show, too, that haptotherapy as a type of complementary medicine is a potentially valuable and effective intervention to increase the well-being of cancer patients who are undergoing invasive medical treatments, when compared with other mind-body approaches as well. More affectivity studies could lead to recognizing haptotherapy as an accepted therapy, which should then include reimbursement by health insurance companies. Oncologists and GPs should be educated to refer their cancer patients to haptotherapy, especially the female and more highly educated patients in an early state of their disease.

Word of thanks
We would like to thank the participating clients and the staff of the Vruchtenburg for their contribution to the annual studies. Also thanks to the members of the IJHH writing group for their valuable comments to the manuscript. Dr. Dorly Deeg was very helpful for the final fitting statistical analyses.

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SPPS (2018), IMP-SAS, UK, Londen.

