THE TINNITUS TOOLKIT

empowering people to live with ringing in the ears

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PART I ANALYSIS
CHAPTER 1

INTRODUCTION

BACKGROUND

Tinnitus

Someone with tinnitus perceives sounds: a whistling, ringing, knocking, or hum, though no external sound source is present. Tinnitus is a common condition, and is not age-related. Estimates vary between 10 and 15 percent of the population, of which around 10 percent experiences high levels of hindrance and it therefore substantially impairs their quality of life (McKenna, Handscomb, Hoare, & Hall, 2014; Langguth et al. 2013, Stichting Hoormij, 2016; Andersson 2002).

Currently there is no cure nor standardised practice for treating tinnitus, but reducing the perceived distress is very well possible. The evidence-based most effective treatment is a combination of specialised cognitive behaviour therapy and audiology (Cima et al. 2012). This treatment aims at reducing the negative reactions evoked by tinnitus, rather than removing the tinnitus perception itself.

People often have the ability to influence their complaints. Conditions, thoughts and behaviour may both worsen or decrease tinnitus. For example, tension or fatigue can intensify the complaints. In addition, paying much attention to the tinnitus sounds can cause aggravation. Tinnitus can create stress, which in turn can increase the tinnitus hindrance, establishing a vicious circle. It is therefore important that one understands the mechanisms that are at play in tinnitus and how to effectively deal with them. For this purpose, practical exercises can help, such as keeping a tinnitus diary and doing active relaxation. Information about these exercises is given in the half-day course ‘learning to live with tinnitus’ at the Erasmus MC.

Erasmus MC Rotterdam

The Erasmus MC has the largest ear, nose and throat (ENT) department of the Netherlands. In this department, a specialized team functions with Tinnitus ENT doctors, audiologists, specialized psychologists, and social workers. For tinnitus patients, the team provides diagnosis, treatment, and possible rehabilitation.

Delft Institute of Positive Design (DIOPD)

DIOPD is a research group at the Faculty of IDE Delft that initiates and stimulates the development of knowledge that supports designers in their attempts to design for human flourishing.

PROBLEM DEFINITION

Information about tinnitus and certain exercises and advices are given in the half-day course ‘learning to live with tinnitus’ at the Erasmus MC. After this course people have the opportunity to sign up for individual counselling.

One problem is that not everyone is equally able to do the exercises independently on the basis of the information presented in the course. People have difficulties translating and applying given theoretical information and exercises to their own situation. Another problem is that counselling allows for a rather passive attitude from the patient in the process of coping with tinnitus. Both problems may have a negative influence on the effectiveness of the treatment.

DESIGN QUESTION

Design a support for people in the process of learning to live with tinnitus.
Tinnitus is the perception, i.e. conscious awareness, of a sound that has no external source: there is no corresponding mechanical activity in the cochlea. It can be seen as a phantom auditory perception. Tinnitus is a real perception. It is no hallucination or thought: you genuinely hear a sound (Jastreboff, 2011; Grewal, Spielmann, Jones, & Hussain, 2014).

Some people experience a ringing in their ears after going out and being exposed to loud music. It usually goes away after a while. This is a form of tinnitus. This project focusses on tinnitus that maintains.

2.1 The tinnitus sound

SOUND PERCEPTION WITHOUT EXTERNAL SOURCE

Tinnitus is the perception, i.e. conscious awareness, of a sound that has no external source: there is no corresponding mechanical activity in the cochlea. It can be seen as a phantom auditory perception. Tinnitus is a real perception. It is no hallucination or thought: you genuinely hear a sound (Jastreboff, 2011; Grewal, Spielmann, Jones, & Hussain, 2014).

Some people experience a ringing in their ears after going out and being exposed to loud music. It usually goes away after a while. This is a form of tinnitus. This project focusses on tinnitus that maintains.
2.2 Tinnitus-evoked negative consequences

Next to the primary auditory symptoms, people can also experience tinnitus-evoked negative consequences. In those who do experience tinnitus-evoked distress it can be lightly annoying up to very intrusive and thereby substantially lower the reported quality of life (Langguth et al., 2013; Jastreboff, 2011).

Although tone, volume and frequency of the tinnitus sound can vary greatly, the tinnitus-evoked negative consequences can be similar among patients (A. Lieftink, personal communication). For a better understanding, the consequences can be grouped into the following categories. Figure 2 illustrates these.

**Physical consequences**

E.g. Tension, stress, restlessness, fatigue, tiredness, energy shortage, sleeping problems, pain

- ‘Two hours of driving is too exhausting, all those sound around you. Then you’re dead tired.’
- ‘Sometimes that sound is so piercing that it gives you a headache.’
- ‘You have to focus very hard on a conversation. Then you’re worn out.’

**Cognitive and emotional consequences**

E.g. worrying, excessive (negative) thinking, frightened, anxious, powerlessness, concentration problems, memory problems, melancholy, gloominess

- ‘Oh gee, what is this? This is not good! This has to go away!’
- ‘It bothered me a lot. I was very upset about it and sad. It would not go away, I was afraid.’
- ‘Is it louder? Or has it become less? O gee, it sounds louder. Did I do something wrong? Maybe it’ll get worse!’
- ‘I am going crazy, I cannot live with this. I will never experience peace and quiet.’

People who experience these tinnitus-evoked negative reactions suffer from bothersome tinnitus. Because bothersome tinnitus reduces the quality of life, treatment is required. This is the focus for this project.

In some cases the tinnitus-evoked negative consequences can become the leading problem, e.g. depression or anxiety, and require separate treatment (A. Lieftink, personal communication). These cases are excluded from this project.

Figure 2: Examples of tinnitus-evoked negative consequences (Lieftink, 2014; Wagenaar, 2012). The quotes are based on the interviews with patients (see Appendix 1 Interviews).
VICIOUS CIRCLE

Tinnitus can evoke stress, which in turn can increase tinnitus hindrance, thus establishing a vicious circle. This vicious circle explains how the problem with tinnitus can aggravate and continue for years (Lieftink, 2014; Wagenaar, Wieringa, & Verschuure, 2010).

HYPERACUSIS

Hyperacusis is an oversensitivity of sounds from an external source. Hearing sounds can then be unpleasant and even painful: even very soft sounds can hurt. Hyperacusis often occurs in combination with tinnitus (Jastreboff, 2011).

Certain behaviour as a reaction to tinnitus can cause hyperacusis and increase the problem. Although hyperacusis in itself is not taken along in this project, it is relevant to mention the here as treatment of tinnitus also includes prevention of hyperacusis.

Behavioural consequences

e.g. attention and concentration problems, decreased joy of life, affected life activities, concentration problems, sleeping problems, restrictions, adaptation, being irritable, withdraw into oneself, obsessively looking for solutions

‘Sometimes in the morning I already hear it and I do not feel like getting up. Then I have to think: don’t be stupid, just get out of bed. That can be difficult.’

‘I go to bed late: it is very intruding in silence. I have trouble sleeping.’

‘I was afraid that if I would expose myself to sound that it would become worse. That gives a lot of stress.’

Social consequences

e.g. concerning work, activities, family, communication: report ill, give up hobbies, financial problems, social contacts

‘I am still slightly nervous: what if...? A lot of things I dare doing now, sometimes I cancel something.’

‘I do not go to concerts anymore.’

‘I do not go to busy restaurants anymore.’

‘I do not go to concerts anymore.’
2.3 Prevalence

Estimates are difficult to make, as many people who have tinnitus are not bothered by it, and therefore it is not registered. The prevalence of tinnitus ranges from around 10 to 15 percent of the population. Of these people many report some influence of the sound, but for 1 to 5 percent it substantially impairs their quality of life (McKenna, Handscomb, Hoare, & Hall, 2014; Langguth et al. 2013, Stichting Hoormij, 2016; Andersson 2002).

Furthermore, it is expected that the number of people with tinnitus will grow because of increased exposure to noise (Langguth et al., 2013; grewal et al., 2014).

2.4 Causes of the symptom

Tinnitus is not an illness but a symptom and can have many different causes. Somewhere in the process of perceiving sounds, and processing signals in general, something can go wrong. Causes can be found in structures that conduct the stimulus to the receptors and the receptors themselves, in the auditory nerve and in the cerebral auditory cortex (Lieftink, 2014; Langguth et al., 2013). The most frequently occurring causes are hearing loss and stress (A. Lieftink, personal communication). Interesting is to note that tinnitus can be caused by factors that have nothing to do with hearing.

Where the tinnitus sound is not dangerous, the underlying cause may be, and require treatment (Lieftink, 2014).

2.5 Current understanding of tinnitus

Tinnitus is a problem of the brain. It is found that the anatomical location of the anomaly that causes tinnitus is the brain (Langguth et al., 2013).

DIAGNOSIS

There are currently no objective clinical tests to diagnose tinnitus. There is no anatomic difference measured in the brains of people with or without tinnitus (Møller et al., 2011).

Somatosound and tinnitus

There are two types of tinnitus: somatosound and (subjective) tinnitus. Somatosound has an internal source, for example an altered blood flow in vessels near the ear, and can therefore be observed by others. (Subjective) Tinnitus can only be heard by the patient. The latter is far more widespread (Langguth et al., 2013; Grewal et al., 2014). This project focusses on (subjective) tinnitus only.

TINNITUS

In people with tinnitus, there is a spontaneous (over) activity in some part of the auditory cortex. This activity is interpreted by the brain as a sound (Lieftink, 2014; Langguth et al. 2013).

BOTHERSOME TINNITUS

It has been shown that people with bothersome tinnitus have abnormal activity in both auditory and non-auditory networks in the brain (Langguth et al. 2013), regardless of the initial cause of tinnitus.

These non-auditory structures are the limbic system and the autonomic nervous system. These are responsible for emotional and behavioral responses respectively (Jastreboff, 2011; Grewal et al., 2014; Langguth et al. 2013).

The experienced distress is currently being attributed to the over activity of the above-mentioned brain systems.
MODELS: DEVELOPMENT OF BOTHERSOME TINNITUS

The link between psychoacoustic characteristics and experienced distress is not straightforward (Jastreboff, 2011). For example, the psycho-acoustic characteristics of the tinnitus of two people can be the same, though one might be bothered by it very much, while the other not at all. There is much debate about the mechanisms by which psychological factors operate to produce or alleviate tinnitus-related distress (McKenna et al., 2014).

The neurophysiological model of Tinnitus

The neurophysiological model of Tinnitus by Jastreboff forms the basis of many treatments of tinnitus, among which treatment offered at the EMC. The model views the functional changes in the nervous system as a conditioned response (Jastreboff, 2011). From this conceptualization, brain activity can be influenced and trained, thus indicating a possibility for psychological treatment.

Therefore it should be possible to remove tinnitus-evoked distress without trying to remove the sound perception through psychological treatment.
2.6 Treatment of Tinnitus

This information is based on interviews with specialists of the tinnitus team (see Appendix 1 Interviews).

**NO CURE NOR STANDARDIZED PRACTICE**

Even though a number of causes of tinnitus is known, a lot of the pathophysiology is poorly understood (Grewal et al., 2014). Treatments aimed at removing the tinnitus sound have not been successful. Currently there is no cure nor standardized practice for treating tinnitus (Jastreboff, 2011; Langguth et al., 2013).

**MULTIDISCIPLINARY APPROACH**

Tinnitus is a multidisciplinary problem, involving medical, audiological and psychological specialists in diagnosis and treatment.

**Medical Treatment**

As tinnitus is a symptom, in treatment, it is very important to first exclude underlying causes that require treatment. If the underlying cause is dangerous and can be treated, it should. This is the domain of an ear, nose and throat doctor (ENT-doctor).

Sometimes a medical cause can be found and treated, though the effect this has on the tinnitus is unpredictable: it can reduce, increase or remain unchanged. Often, no medical cause can be found.

**Audiological treatment**

Tinnitus is often caused by hearing loss (A. Lieftink, personal communication). If this is the case it should be examined whether a hearing aid can improve the situation for multiple reasons (see Appendix 2 Treatment of tinnitus). This is the domain of an audiologist.

Again, it is unpredictable what will happen and how a person and their tinnitus will react to a hearing aid. Some people experience relieve from their tinnitus, for others the tinnitus sound becomes more present, or it might also not make any difference.

**Psychological treatment**

Psychological treatment aims at reducing the negative reactions evoked by tinnitus, rather than removing the sound itself. This is the focus for this project. This part of treatment will be discussed in the next chapter.
CHAPTER 3

PSYCHOLOGICAL TREATMENT

The psychological treatment of tinnitus is the focus of this project. The content of the design will be based on the psychological treatment as used currently at the EMC. Therefore this chapter looks into the theory and content of treatment.

3.1 Goal of psychological treatment: Habituation

The goal of many psychological treatments of tinnitus is to reduce the negative tinnitus-evoked reactions, rather than removing the tinnitus perception itself, through a process called habituation (Langguth et al., 2013; Jastreboff, 2011; Grewal et al., 2014).

HABITUATION: MEANING AND ATTENTION

Habituation is the process of learning to recognize and subconsciously ignore an unimportant stimulus. It is a form of implicit learning, meaning that there is no awareness of that what has been learned (Jastreboff, 2011).

In the case of tinnitus, there are two important conditions for habituation to occur.

1. The meaning of the sound
   The meaning that someone attributes to the sound should become meaningless, not important.

2. Attention paid to the sound
   Attention paid to the sound should become less: no attention means no influence (McKenna et al., 2014).

HABITUATION TO SOUND: EXAMPLE SITUATION

This example is meant to give an idea of what habituation means and the aspects that are at play in the process.

Imagine someone coming to live in a house next to a busy railway. In the beginning the sound of the trains passing by is annoying, loud and irritating. But as time goes by, he gets used to it more and more. And after a while he does not even notice it at all.

What happens here is that the brain learns to filter the sound. It is still there, but it is not being consciously perceived by the brain: it automatically chooses not to pay attention.

This process can occur because the stimulus is not reinforced: the attributed meaning of the sound becomes unimportant. This process takes time.

Imagine an early Saturday morning after a very busy week and you and you are very tired. In this situation it can become harder to ignore the sound, and it becomes annoying again. This illustrates how your emotional and physical state influence the perception of the sound. The sound of the trains may be the same every time, the effect it has on you may vary.
HABITUATION WITH (BOthersome) TINNITUS

What you see happen in the example situation is that habituation, as the definition describes, happens naturally. This process can be similar for tinnitus. Most people that get tinnitus experience distress in the beginning, though after a while this becomes less (A. Lieftink, personal communication).

In people with bothersome tinnitus, the complaints of distress are associated with a failure of habituation. The process of habituation is slowed down by factors such as the stimulus acquiring an emotive significance (Andersson, 2001) and by high levels of arousal or stress that are thought to reduce the ability to filter out and ignore the tinnitus sound (McKenna et al., 2014).

The longer a person experiences distress, the more difficult it becomes to treat (Møller et al., 2011).

3.2 Specialized cognitive behaviour therapy and audiology

Currently there is no standardized practice for treating tinnitus, but the evidence-based most effective treatment is a combination of specialized cognitive behavior therapy and audiology (Cima et al., 2012).

The aim of Specialized CBT is to change the patients’ attitude towards tinnitus to reduce symptom severity. This therapy consists of different components, e.g. psycho-education, distraction techniques, attention and focusing techniques, relaxation exercises, cognitive techniques and sound enrichment.

Treatment offered at the EMC is based on specialized CBT and Audiology. Therefore this will be the content offered in the design.
CHAPTER 4

TINNITUS AT THE EMC

This project is commissioned by the EMC. This chapter describes diagnosis and treatment for tinnitus as provided by the EMC, with a focus on the information course ‘learning to live with tinnitus’ that is part of the psychological treatment. The design will be offered by the EMC and should fit with the treatment.

4.1 The Erasmus Medical Center

The Erasmus Medical Centre (EMC) is an academic medical center, connected to the Erasmus University of Rotterdam. The EMC has the largest ear, nose and throat (ENT) department of the Netherlands. In this department, a specialized tinnitus team operates (Erasmus MC, 2016).

THE TINNITUS TEAM

The tinnitus team at the EMC provides diagnosis, treatment and possible rehabilitation. The team consists of ENT-doctors, audiologists, neuropsychologists and a social worker (see figure 3).

The most usual ‘route’ for people to follow past all specialists of the tinnitus team is from left to right in figure 3. People do not always follow this standard route. In practice they can drop in and out at every person.

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<tr>
<th>Medical Assistant</th>
<th>ENT-doctor</th>
<th>Audiologist</th>
<th>Psychologist</th>
<th>Social Worker</th>
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<td>The medical assistant makes a tone audiogram and a speech audiogram and sometimes a psycho-physical matching is executed (Appendix 2).</td>
<td>The ENT-doctor examines possible underlying medical causes and treats this if necessary.</td>
<td>In case of hearing loss, the audiologist examines possibilities for a hearing aid.</td>
<td>The psychologist offers two things: 1. Information course ‘learning how to live with tinnitus’ 2. Short cognitive-behavioral counselling.</td>
<td>The social worker advises the patient and sometimes mediates when practical issues arise.</td>
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Figure 3: Members of the tinnitus team and their tasks
OBSERVATIONS IN THE TREATMENT PRECEDING THE INFORMATION COURSE

This part describes some observations of the treatment preceding the information course. From these observations I derived insights that are relevant to my design [see chapter Insights].

Waiting times

Assuming a person takes the ‘standard route’ past all specialists, between 2 to 4 months pass before a person attends the information course, after their first consult at the EMC.

Overview

Neither the number of consults nor the actual treatment and its results are registered. Members of the team make different estimates.

‘We might be known for our tinnitus treatment, but I have no clue what our results are.’

Communication and collaboration

There are no scheduled meetings for the team as a whole. Once a month there is an opportunity for a meeting, in which ENT-doctors do not participate. This meeting is barely used for discussing tinnitus. Individual team member deliberations take place in corridors (corridor chat) and are about individual cases.

‘We do not experience any problems or bottlenecks, so it is not necessary [to meet more often] as far as I’m concerned.’

Content of the consultation

The explanation and education given during a tinnitus consultation by ENT-doctors and audiologists is based on implicit knowledge and agreements.

‘I notice, in fact a lot [of information] is implicit, once maybe based on former agreements.’

‘It is mainly common sense and good agreements and a similar basis that everybody is kind of talking about the same.’

Informed consent

The ENT-doctor and the audiologist explain the options for treatment, including the information course. The patient decides. The interviewed specialists did either participate in the tinnitus information course around ten years ago, or not at all. Some have the handout of the course.

It is not always clear for people what the course is for:

‘I thought, do I really have to go to a course about hearing..?’

‘I thought, maybe they are going to tell me the solution for tinnitus.’

Different views on tinnitus

Tinnitus is not such an interesting problem to ENT-doctors, as they cannot really do anything about it. They view their main task as passing someone on to the right person.

To audiologists tinnitus is the second biggest problem, after hearing loss. They view their main task as reassuring people and providing some counselling.

WHO WITH WHAT COMPLAINT SEEK HELP AT THE EMC TINNITUS TEAM

Everyone can get tinnitus, therefore this is a very diverse group. In practice, more elderly people have tinnitus due to the relation with hearing loss.

In the case of the EMC, specialists assume that the target group consists of more severe cases. It takes some effort to go to the EMC and the hospital is known for their specialized tinnitus team. This project focuses on adults only.
4.2 Psychological diagnosis and treatment at the EMC

COURSE AND INDIVIDUAL COUNSELLING

For psychological diagnosis and treatment the EMC has two things to offer: the information course ‘learning to live with tinnitus’ and individual counselling.

There are two psychologists working part-time in the tinnitus team providing all psychological care..

TARGET GROUP OF THE COURSE

The information course is aimed at and helpful for everybody who approaches the EMC with tinnitus. It is not suitable when:
- the patient’s hearing is too bad to participate in a group;
- psychopathology is involved;
- the patient has a cognitive or linguistic disability.

People who do not qualify for attending the course can receive individual counselling. Also, at the end of the course, one can request follow-up individual counselling.

4.3 Course ‘Learning to live with tinnitus’

In my view is the current information course a possible way of offering support to people in the process of learning to live with tinnitus. This is the subject of this project. Therefore a closer look is taken into how this is currently organized, what goes well and what can be improved?

BACKGROUND INFORMATION OF THE COURSE

About ten years ago the information course was set up at the EMC to support people in learning how to live with tinnitus on their own. The reason for this was that psychologists observed that patients tend to continue making appointments and adopt a passive, dependent attitude. This may have a negative influence on the effectiveness of the treatment. Next to that, a group course enlarges the capacity of the hospital and it brings down costs.

GOAL OF THE COURSE

The purpose of the course is to enable and stimulate people to cope with their tinnitus independently. In the course psychologists inform people about tinnitus and give tips and advice to influence their tinnitus, rendering it less bothersome.

SET-UP OF THE COURSE

- The course is provided by the EMC for people with tinnitus (and their partners), given at the EMC;
- The course is in the form of a group meeting with a PowerPoint presentation;
- It takes 2 times 1 ½ hours on one day: convenient for people and within the resources of the EMC;
- About 12 participants per course;
- The course is given once, sometimes twice a month depending on enrolments;
- The course is mainly a PowerPoint presentation, people are free to ask their questions at any time and sometimes an exercise is included as an example;
- Paid for by the insurance company.
4.4 Psychological diagnosis and treatment at the UMC Utrecht

Although this is a project by order of the EMC, I have also taken a look at the course ‘Tinnitus, tips and tricks’ offered at the Universitair Medisch Centrum Utrecht, the UMC Utrecht.

As this project will focus on a more practical content than the current EMC course provides [see chapter Design goal and Vision], the UMC Utrecht course forms a good and accessible source of information. This course is given by the same course instructor as at the EMC and is based on the same model of tinnitus. This course is different in set-up and execution, in particular more extensive and more practical.

COURSE ‘TINNITUS TIPS AND TRICKS’ AT UMC/U

Goal of the course

The goal of the course is to help people search and find a different way to deal with tinnitus. What way this is, the course cannot instruct, but it helps you look for and find your own way.

Set-up of the course

- There is an intake session with a psychologist or social worker
- 5 weekly meetings
- After 3 months there is one follow-up session with the whole group
- The course is given by a psychologist and a social worker
- Group sessions, no (PowerPoint) presentation

CONTENT OF THE COURSE

The course consists of two parts:

Part 1 – Background and understanding

The first part of the course aims to explain the medical and theoretical background of tinnitus. The purpose of this part is that people make the shift of tinnitus being a problem of the brain, instead of the ears. This insight makes it understandable why a psychologist is relevant to the problem.

The first part explains that tinnitus is seen as an over activity in certain parts of the brain and that there is no damage to the brain. It also explains that there is no medical solution and although a lot is still poorly understood about tinnitus, improvement of the situation is very well possible.

Part 2 – Practical tips: what can you do

The second part of the course aims to explain factors that are relevant in causing, influencing and maintaining tinnitus. The psychologist explains the possible negative consequences and advices on how to deal with those factors to decrease the hindrance.

The course is regularly updated with new research outcomes.
CHAPTER 5

INSIGHTS

LEARNING TO LIVE WITH TINNITUS

The chapter describes the insights in the process of learning to live with tinnitus that I gained during the analysis phase of this project. These insights are my personal view on the process of habituation. They form the basis for the design process and the rest of this report. The purpose of this chapter is to illustrate what people can experience in their process of learning to live with tinnitus. What does it mean: learning to live with tinnitus? How does that process go? A look is taken as well into how to support this process: what do the current EMC and UMC courses offer, and how does that go? What needs do people have and how could you support them in those?

The information in this chapter is taken from interviews with members of the tinnitus team and patients. A short description of this set up can be found in Appendix 1 Interviews.

5.1 Insights

People think tinnitus is a problem of their ears, and do not relate it to the brain

‘I hear something, it is in my ears, something needs to be done about it there.’

Therefore it is difficult to see that people themselves have an influence on the experienced hindrance. Understanding this mechanism is the first step to improvement.

Perception equals hindrance

To most people, mostly in the beginning, the perception of the sound IS the hindrance they experience. It can be difficult and take some time to be able to see those two things as separate. It can be hard to believe that it is possible to still hear the sound and not be bothered or influenced by it.

Improvement is possible (goal)

Therefore the message that improvement of the situation, the goal of psychological treatment, is difficult to believe.

Doctor: ‘chances are that you will experience less hindrance in a while.’

‘I don’t believe that. How can you hear this and not be bothered by it? You will still hear it.’

To actively improve your situation, one should understand the mechanisms that are at play with tinnitus. For many people it is first difficult to see their complaint in a broader perspective than the perception of sound.

People want the sound to be gone

‘How do I get rid of this sound? How do I turn it off?’

People want to get rid of the sound (as quick as possible).

‘Who is going to solve this for me (now)?’

People expect, or hope, that there is a solution: that someone can take away the problem at this moment. The message that this is not possible is difficult to believe.

The sound is permanent, there is no solution

Doctor: ‘Medically, we cannot do anything for you, we cannot remove the sound.’

This message can be very difficult to believe and accept.

Some people keep searching, ‘shopping’ for ‘the solution’

‘There probably is a solution somewhere…’

‘There must be something that makes it go away.’

Some people do not (want to) believe that tinnitus is something permanent:

‘but I have a pain in my neck as well, they [the doctors] have not taken a look at that yet.’

‘I read on the internet that it can be caused by that.’

There is a proliferation of ‘solutions’ offered on internet.

‘You will try everything of course, until it appears to have no effect.’

People visit all kinds of specialists and institutions hoping to find a solution. Different specialists can contradict each other, confusing people even more.
‘What this doctor says is wrong’
Information people read on internet in combination with the limited physical examinations makes it difficult for them to believe that the sound is permanent.

‘Some examinations are still going on, maybe they find something, who knows.’
If medical examinations are still ongoing, people keep hope that something will be found that leads to a solution.

People do not want to or cannot believe that the sound is permanent. This causes them to look for other options. This makes that they pay a lot of attention to the sound and therefore it keeps bothering them. You want them to realize, conclude for themselves, that the sound is permanent and behave differently, in a way that furthers the habituation process.

For some people it is sufficient to know nothing is wrong.

Doctor: ‘There is nothing wrong. The best thing you could do it not to pay too much attention to it.’
‘Ok.’

Afraid and Insecure
People think it is dangerous or something is wrong. They are afraid to do something that might increase the sound:
‘I am afraid to do something wrong that might make it worse.’

‘[If I would listen to it] I am afraid it will become worse, and that I will go mad.’
People are afraid to listen to the sound; they do not know what will happen, and think it might make it worse. This strengthens the negative meaning attributed to it.

Tinnitus has a strong relation with stress and fatigue
See chapter Tinnitus for explanation. For this reason it is important that people find relaxation, while tinnitus can make it difficult to find just that: many people experience sleeping problems and are continually afraid and alert, monitoring the sound or other sounds in the environment.

Being tired and stressed often causes people to give up their hobbies first, but these can be beneficial to the situation.

‘On the internet you only read horror stories’
‘You should not read those [stories], but they talk about something that interests you.’
For example negative stories on media can increase stress and contribute to the negative meaning somebody attributes to the sound, thus increasing the experiences hindrance. Therefore getting right information about tinnitus is very important and can have a positive effect on the experienced hindrance.

Behavior towards external sounds
Many people become careful with sound and are afraid that exposure to sound can aggravate their tinnitus. The opposite is true, but many do not know this. As people are often focused on the sound of their tinnitus, they become more alert to sounds in general. Eventually this could lead to hyperacusis.

Attention
People are monitoring their tinnitus to see if it has changed.
‘Is it still there? Yes, it is still there.’
This makes that they pay attention to it, making it [seem] louder. Also talking about it has this effect.
‘How is your tinnitus?’
‘Well, the other day it was very intrusive...’

In the case of habituation, people would not be paying attention to their tinnitus anymore. This is what you want.

Doctor: ‘The best thing you could do is not to pay attention to it too much.’
‘But it is always there, how can I not pay attention to it?’

In order to do this, people should understand what attention is, how it works and why it is relevant to tinnitus.
Worrying
'I cannot live with this, it makes me go mad.'
'I can never experience peace and quiet anymore.'
'This will never go away, they cannot do anything about it. What if it gets worse...?'
People often worry about their tinnitus. It is an unfamiliar sound and they are not sure what is happening and will happen. Worrying can intensify the negative meaning attributed to the sound.

Decrease hindrance: what to do?
'Ok, it is impossible to turn off my tinnitus. So what do I do now?'
People do not know what 'living with tinnitus' is: what to understand from that and how to decrease their experienced hindrance.

People try to (actively, consciously) influence their tinnitus
People try to run from the sound
'I always put on some music, because then the tinnitus sound is less loud.'
'I always wear earplugs, so it does not get worse.'

'Behavior' of tinnitus
'In silence it seems louder, in ambient noise it seems less loud'
' [...] if you make a certain movement with your head, you can make it less loud.'

Distraction
During certain activities, people experience that they do not hear their tinnitus [that loud]. This is because they focus on something else.

People are searching for ways in which they hear their tinnitus less loud. The perception of tinnitus can change due to attention paid to it or sounds in the environment.
These actions are often based on short term effects, which do not always improve the situation on the long term. It might even worsen it. For example, using background noise to mask your tinnitus, reduces its impact at that moment. Though on the long term, if applied continuously and persistently, it might not improve the situation.

Finding distraction is useful, but can lead to (continuous) flight-behavior
Finding distraction is useful because it helps people take their mind off tinnitus: you want them to be involved with it as little as possible. It gives people rest and can help them build up their energy. Being effective in finding distraction can be a first step to improvement. Then you want to increase those moments in which you do not notice your tinnitus, up to a level that it becomes not bothersome anymore. Experiencing less hindrance can change the meaning somebody attributes to the sound.

Finding distraction can be difficult because of the 'pink elephant': trying not to think of something automatically makes you think of just that. For that reason people can do activities that require attention, which leads away attention from their tinnitus. A possible pitfall of this is, that people might evaluate whether the activity is effective by focusing again on their tinnitus.

Distraction can easily lead to continuous flight-behavior because it is flight behavior. It is impossible and undesirable to constantly be on the run from your tinnitus, though this can happen. What can happen for example is that if somebody has found an activity that works well for them as distraction, they can cling on to that specific activity. They can become afraid that stop doing that activity will increase their tinnitus (hindrance). In this case tinnitus still has a big influence on somebody’s life.

Not all activities that work as distraction are recommended. As tinnitus has a relation with stress, it is desirable to find distraction activities that are calming and relaxing, and not generating adrenaline for example.

What you want for people to achieve, it that they do not pay attention to their tinnitus, but do not run from it either. Therefore it is important for people to understand the reasons for doing certain activities and become aware of their own motivation for doing these.
As a consequence of finding distraction it is possible that the experienced characteristics of tinnitus change. As a result it is possible that somebody attributes less importance to the sound, but not necessarily.

**Meaning**
The attributed meaning to the sound should become ‘unimportant’. There are different ways that can change this meaning, for instance through receiving and believing certain information about tinnitus. As explained, the attributed meaning can change through experiences as well. Also the meaning can change by changing your thoughts about your tinnitus, by using cognitive techniques.

**People seek control in different ways, while this is not possible**
There are different ways in which people (subconsciously) seek control over their tinnitus. For example trying out everything that promises to get rid of the sound or clinging on to a certain activity that works as distraction. This is not the best way to go about, because you cannot control the sound. Also through wanting to control your tinnitus, it is still on your mind and still can have an influence. Many people keep fighting or running from the sound.

**Let go: accept the sound**
What you want for people to be able to do is let go. The goal should not be to get control over your tinnitus, but to find it not interesting or important anymore: accepting the sound.

‘yes it is there, but I just don’t pay attention to it.’

As long as you want the tinnitus sound to be gone, it will stay. When you are okay with it being there, it will (probably) fade into the background.

Ideally choices people make should not be affected by their tinnitus anymore. You want people to be able to make the least possible adjustments in their life as a reaction to tinnitus as possible (for example: finding more relaxation can be a good adjustment). You want people to conclude that their tinnitus is not important and put their time and energy in things that are important to them.

Acceptance and not paying attention do not necessarily go hand in hand. People can accept the sound, but do not know that and therefore how you can decrease the hindrance you experience: and thus it remains bothersome. On the other hand, people can be rather effective in finding distraction and not paying attention to the sound, but still wanting it to be gone: they cannot let it go.

**Habituation is a learning process**
As can be read from the definition of habituation (see chapter Psychological Treatment), it is an implicit learning process, meaning that there is no awareness of that what has been learned (Jastreboff, 2011). In the case of bothersome tinnitus however, you could say that this process is being obstructed. Therefore you want people to go through this learning process while being more aware of it.

**Automatism → awareness**
People are not always aware of how they are dealing with something, in this case their tinnitus, which makes it difficult to (actively) change something about it. People do not always realize that they have an influence on their hindrance. And in order to change your thoughts regarding tinnitus, you should first become aware of those thoughts. It is therefore relevant for people to become aware of those, in order to do something about it.

**Active process of behavior change**
Therefore, in the case of bothersome tinnitus, habituation should become an active process, as it is not occurring naturally. People who experience hindrance, should change something about their behavior (behavior includes thoughts/cognition and emotions), in order to decrease hindrance. This implies doing and experiencing new, different things than what they are used to.

I see habituation as assuming a different attitude towards your tinnitus: learning a habit. I see it as a skill: it has no concrete goal.
It is a process that only the person himself can do: he has to be open to it
Changing your behavior, or assuming a different attitude: is something that people have to be willing to do. They should be open to psychological care and techniques. If not, there is nothing you can do. As opposed to, for example, a broken leg can be cured without the patients’ cooperation.

You want people to gain various insights (through experiences) and draw conclusions for themselves
For example: you can tell somebody that the sound is not dangerous and ‘just don’t pay too much attention to it.’ Or: ‘the best thing you can do is to focus on the important and interesting things in life.’ These are well-meant advices and someone might want to believe it, but experiencing his tinnitus in this way can be something different.
Therefore you want for people to gain these kinds of insights and draw these conclusions for themselves, rather than having people understand them (only).

Very diverse and personal processes
Tinnitus is different for everybody, as well as the process of learning to live with it.

The type of sound, the psychoacoustic characteristics differ from person to person, and form time to time. Also the way tinnitus reacts to things differs from person to person. For example for some people background noise is masking the tinnitus sound, for others it makes it more prominent.
The types of consequences that people experience differ a lot. For example, some people have trouble sleeping, others do not. Some people experience changed behavior towards sounds, others do not. There are there are numerous tinnitus evoked consequences that people can experience.
The degree of intrusiveness people experience differs a lot. It differs from person to person how they react to and cope with tinnitus; personal characteristics play a big role. The background of people differs a lot: it is a group with wide demographic characteristics. It differs a lot what people like to do and what works for their tinnitus. For example, gardening can be relaxing for someone and not for someone else.

Nobody can tell you how to live with tinnitus, but somebody can help you find your way
This is because it is a very personal process. It is up to somebody himself to find a way to live with tinnitus. What that way exactly is, what it looks like in practice: nobody knows. People themselves do not know what will work for them, as they should be doing something different, new things (see behavior change). A therapist cannot tell somebody what will work for them either, even if you know all consequences and complaints. Therefore it is up to the person himself to discover what works. However, what you can do is help somebody looking to find their own way.

People do not know what they can or should do
As a reaction to tinnitus, people often do things that are not beneficial to their situation or might not improve it on the long term. They do not know what to do and what not. It is important for them to understand what ‘good’ behavior is and how to behave accordingly.

Most people I spoke with wanted to do something about it, while it is best to just let it go.
‘You want to be able to tell yourself that you did everything you could.’

People do not always understand why a certain activity has a positive effect
When people give each other advice of what helps, these are usually things that work as distraction or relaxation [e.g. take a long shower in the morning]. I got the impression that they did not always understand the underlying reason why these have a positive effect and that these are very personal things and do not have anything to do with tinnitus specifically. Understanding this mechanism can enable people to find more suitable activities.

Many helpful things that people could do independently exist, but people do not know about it or know how to find it, as these have nothing to do with tinnitus
Examples are: sleeping courses, breathing courses, relaxation course, mindfulness, yoga etc. People do not know about these being helpful for tinnitus. These activities do not have anything to do directly with tinnitus, therefore it is difficult for people to search and find them.
People do not know in what way they should do something
It is not only important what kind of things people do, but also how they do them. For example, distraction activities can be very helpful, though can also lead to continuous flight behavior. Or if somebody is doing a relaxation exercise while continuously checking the effect of it on his tinnitus, it will not have the desired effect.

5.2 Tinnitus Team EMC: Insights
The whole tinnitus team plays an important part and has a responsibility in the psychological treatment of tinnitus patients

‘In this group, phrasing X or phrasing Y can make a considerable difference. And that [the phrasing] can vary greatly [within the tinnitus team].’

‘I try to adapt [my explanation] to the person sitting in front of me. I find it quite difficult to explain it well.’

It takes a (very) long time until people can participate in the course
Diagnosis and treatment in the EMC hospital (up to attending the course) takes a lot of time, which can have a negative influence on the effectiveness of the psychological treatment. Time is a very important factor in the process: the longer it takes and the habituation process is going ‘the wrong way’, the more difficult it is to reverse (Møller et al., 2011).

‘Faulty’ information people find outside of the hospital [media, internet] can have a significant, usually negative influence on the habituation process. Also the [negative] influence of the consultations with specialists of the tinnitus team can become quite big, as there is a long waiting time for people to participate in the course to receive a more detailed explanation.
5.3 Course EMC: Insights

People appreciate meeting fellow sufferers very much
The stories of others are mainly what made an impression on people and what they recall from the course. It helps people feel not alone and put things into perspective. Most people mentioned they were relieved to see others experiencing more hindrance than they did themselves.

People like having an experts’ view on their personal situation
‘I appreciate hearing that information from a reliable source.’

Very diverse and unknown target group
The audience of the course is unknown (beforehand)
The course instructor does not know anything about the participants when giving the course: there are no data [on complaints, hindrance etc.] available.

The audience of the EMC course is a very diverse group
In theory they consist of the more serious cases without psychopathology. In practice, this varies greatly. They have very different backgrounds and experience different consequences to varying degrees. Also their history in received tinnitus care is very diverse.

It is unknown how effective current treatment is and what part of the group has what (further) needs
There is no course evaluation after some time of participating. A small part of the participants of the course at the EMC request a follow-up meeting. However, this request is filled in directly after attending the course, and therefore there is no room for any effect to occur as a result of the course before requesting more help.

Informing and educating is the first step
Certain information, given during the EMC course, is helpful before being able to actively change your way of dealing with tinnitus, but does not always come across well or sticks to people.

Important information
Information about what tinnitus is and what it is not, and understanding what it means to ‘live with tinnitus’ [the ‘goal’] is required to be understood before being able to do so. For example, if one does not understand that the ‘goal’ is to experience less hindrance, you do not know whether what you are doing and experiencing is ‘good’ or not.

This information is in short:
• Tinnitus is not dangerous, there is nothing wrong.
• Tinnitus is a problem of the brain that is overactive in certain parts.
• There is no solution to remove the sound, but improvement of the situation is very well possible: the ‘goal’ is to experience less hindrance.
• Perception does not equal hindrance.
• Treatment is aimed at reducing the negative consequences.
• It is a process that takes time.
• It is a process that you have to do yourself.

Essential points can be missed
The target group is very diverse and unknown by the course instructor. The set-up of the course is flexible to be able to respond to personal situations and questions. There is a limited amount of time. As there is a lot of information being conveyed people can miss the main message. Aiming to be flexible and discuss many personal questions that come up during the course in a short amount of time, interrupt the main story to be conveyed and result in a kind of enumeration of abstract options. Essential points can then get lost in the vast amount of information.

‘I did not realize that the goal is to decrease the hindrance’

This can be a problem as it is meant as the starting point of the habituation process: if it does not come across, it can result in an ineffective process.

Independently enter into the habituation process
Although the course is set up to enable people to independently enter into the habituation process, some people are not able to apply given advices well as it remains abstract and theoretical.

‘where do I start? What can I do?’
‘how can I apply this to my personal situation?’
‘where do I start? What is important for me?’
‘what should I do? Does this help for others? When should I do it?’
First search, than do
The purpose is for people to be able to manage for themselves. For some people this seems difficult on the basis of the information presented in the course. The things people can do that are beneficial for the habituation process, are things that they first have to search for and select themselves, before being able to execute them. Based on the information presented during the course and what is available on the internet, it can be difficult to find useful things for your personal situation and people get lost easily.

Possible actions mentioned during the EMC course that you can search for and execute independently do not directly help you change the meaning of tinnitus
Other than new information about tinnitus that might change the meaning you attribute to it, there are no accessible options mentioned aiming directly at changing the meaning of the sound, that you could do independently.
A short list of therapies that could help, such as CBT, is given. Only these are not easily accessible (high threshold), nor do most participants require therapy (otherwise they would have an individual consult) and they are not to work with independently (allowing for a passive attitude from the patient).

5.4 Course UMC Utrecht: Insights

People appreciated the course and wanted it to continue
People really appreciated meeting others. Again here, it makes them feel they are not alone in this and it helps them put things into perspective. Mostly the stories of others made an impression. They described the course to be a pleasant resting point.

'I wanted to course to continue. I would have liked to have more individual conversations [with the course instructor] about the cause of my tinnitus.'

'We did not do all the exercises, so I wanted it to last longer.'

'I helped, not that my tinnitus is gone, but it was less during the course.'

After participation in the UMC Utrecht course, people still have trouble accepting the sound, thus impeding habituation

'Acceptance is starting point [of the course], but it is not there in anyone.'
The course starts with: you have tinnitus and it cannot go away, you need to accept that. Now, we will help you find a way to deal with it in order to make it less bothersome. The goal of the course is to accept the sound, so that it becomes possible to (automatically) ignore it. This seemed confusing for some of the participants.

People stick to the hope of finding a solution
The interviewed people all mentioned still having hope for finding a solution that might take the sound away.

'They did not do enough examinations, maybe they will find something that leads to a solution.'

'But if I do not have hope, what do I have left?'
I got the impression that acceptance of the sound was still missing, and that this impedes the habituation process.
PART II CONCEPTUALIZATION
This chapter describes the first part of the design process: the design goal and vision. These will be guiding for the development of the concept and the detailing of it. The design goal and vision are based on the insights gained from the analysis, mentioned in the previous chapter.

6.1 Design goal

The design goal is formulated to serve as a guideline for conceptualization.

I want to enable and support people to find their own way to learn to live with tinnitus, by offering an addition to the information meeting which will invite them to immediately and independently get going.

Below I will explain the different parts of this sentence separately: what I mean by it and where it comes from.

Enable and support to find their own way

The design should enable and support somebody in finding their own way to live with tinnitus.

A person has to discover their own personal way to live with their tinnitus [see Insights], because no one can tell him [see Insights].

Focus on acting and experiencing

The design will focus on enabling and supporting people to act, do and experience.

Through psychological treatment, you want people to realize change of behavior [see Insights]. This is something people should do [see Insights], rather than only read, understand and listen.

The course now has been found too abstract for that purpose: people want to do something but do not know what and how, based on the current course [see Insights].

Through experience people can get certain helpful insights about their tinnitus [see Insights]. The design should aim to realize these insights through acting and experiencing, rather than through understanding.

Focus on acting independently

The design will enable people to work with it on their own, without the help of a therapist.

The habituation process is a process only people themselves can do: no one can do that for them [see Insights]. You want people to realize this, you want to stimulate this and you want people to be able to do this. The design will have the same goal as the information meeting.

The Erasmus MC has limited resources to realize more involvement in the habituation process of people [see Tinnitus at the EMC].

Additional to the EMC information meeting

The design will be an addition to the information meeting at the EMC*. 

The first step in the habituation process, is understanding what is happening and what is going wrong [see Insights]. The information needed for this understanding is offered during the information meeting.

The next step is to apply this information. It appears that some people need more support with this step [see Insights], and that is what the design will offer.
Inviting

The design will be an open invitation for people to take or leave.

If somebody is not willing to do something the design will not help or change anything (see Insights). Especially as you are on your own with the design. What you do want, is people to be open, interested and motivated: they should be the ones to act. The design should invite them to.

Act immediately

The design will enable people to act immediately after attending the information meeting.

The sooner people can start practicing, the better. It will shorten the period of experienced distress and it will be easier to treat [Møller et al., 2011]. I think it can reassure and calm people when they know what they can do when they get home directly after the information meeting. This is good for dealing with tinnitus (see Insights).

People who participate in the information meeting of the EMC (target group)

The design will target the participants of the information meeting, especially those for who the information meeting only is not sufficient.

It will target the whole group as the design will be an addition to the information meeting.

*Assumptions on the information meeting

This project focusses on enabling people to act independently. The information required prior to this will remain subject of the information course. For this project, it is assumed that this information is conveyed well. However, as can be read in chapter Insights, some people experience problems understanding or remembering these essential points This might make them unable to be effective in achieving improvement. Even though this is essential in the process, this project does not focus on conveying that information, but focusses on enabling people to act. The fact that people do not understand or remember important information well is taken along in this project, but is not the focus of it.

Suggestions for adjustments of the information meeting allowing the design to be integrated well in the treatment offered at the EMC are given in chapter Evaluation and Recommendations.
6.2 Vision

This part will describe two images that will illustrate the way I want people to experience and understand the design. These images are guiding in the development of the design from the goal to concept to detailing.

OFFERING A HELPING HAND

The design should feel like someone is offering you a helping hand [see figure 5]. Being offered a helping hand is a caring and unconstrained gesture. It is an open invitation: it is up to you to take it or leave it. It is a small and simple gesture of support: you are not on your own. It offers direction and it is guiding: this is a step into the right direction.

Small and simple

The design should be a small and simple gesture. It should not be something dramatic and compelling. Nor should it be comprehensive. It should communicate a simple solvable problem: it should make the problem feel manageable.

Inviting and passive

The user has to act, not the design. If the user does not do anything, nothing will happen. People should work with it of their own accord and not feel compelled to do anything. Therefore the design should be inviting and passive.

Accessible and easy

It should be easy to accept the offer of help, in order to activate people. Therefore the design should be accessible and easy to work with.

Caring and supportive

The design is there to help you, it is not about the design. The design should be unpretentious and supportive: it should serve you.

Clear and structured

The design should be clear and structured, not confusing in any way.

Directional

It should be directional in the way that people know what to do that is helpful: a small gesture that helps them into the right direction.
A GOOD FRIEND

The design should feel like a good friend (see figure 6). A good friend is your equal. You know him and you can trust him. He is empathic and he is there when you need him. It is a person that wants the best for you. He tells you the truth even when it is difficult. He is a calm and easy going friend.

Safe and familiar

People should feel safe and trust the design. It should reassure them. The design should feel familiar. It is very important for people to feel addressed by and recognize their situation in the design.

Calm and relaxed

The character of the product should be calm and peaceful.

Sincere and honest

The design should feel sincere and honest. It has nothing to hide, it is completely open to you and unprejudiced. It should not represent something better than it is, but also not more difficult. Some things can be very difficult: the design should not try to cover this up or be pampering: it is how it is.

Empathic and understanding

The design should be empathic and not abstract: in order to make the interaction more human. It should be understanding. In this way people will feel more supported and addressed by the design. It should not be pedantic, but it should be on the same level as you.

Reachable and available

The design should be there when you need it.
CHAPTER 7

CONTENT: ACT

The design has to be concrete and practical [see design goal]. The question then is: what are those practical assignments, exercises and activities that you can offer to people that they can actually do, that will help them habituate to the sound?

The current EMC course offers few practical tools for people to get going. These mostly involve dealing with sound and attention. The UMC Utrecht course has a more practical set-up compared to the EMC, but the number of exercises is limited too.

Therefore I was searching for practical applications of psychological therapies. I had various goals I wanted the design to facilitate. For example: what assignments are available to help people realize that tinnitus is not worth paying attention to? Or how to facilitate people to differentiate between perception and hindrance? But most importantly, how to facilitate and support people in accepting the sound? This problem still remains although people participated in either the EMC or UMC U course [see Insights]. This is where Acceptance and Commitment Therapy (ACT) comes in.

Even though the content of the treatment is not up to me to fill in, I think that it is useful to include (parts of) ACT in the treatment of tinnitus. This is discussed with and in agreement with the client.

This chapter briefly explains ACT and my reasons for including ACT in the treatment of tinnitus.

INCREASE PSYCHOLOGICAL FLEXIBILITY

The objective of Acceptance and Commitment Therapy (ACT) is to live a rich and meaningful life and accept the inevitable pain that is part of it. It aims to increase one’s psychological flexibility, which refers to the human ability to fully contact the present moment, while being open to experiences and act according to your values (Harris, 2010).

ACT AT THE EMC AND UMC UTRECHT

Currently sometimes ACT techniques are used in individual sessions at the Erasmus MC. It is not used in the information meeting. Some exercises derived from ACT are used in a session at the course given at the UMC Utrecht.

BACKGROUND OF ACT

Acceptance and Commitment Therapy is a relatively new therapy developed by Steven C. Hayes, Kelly G. Wilson and Kirk D. Strosahl at the end of the twentieth century (Jansen & Batink, 2014).

According to the ACT-model of psychopathology there are two processes crucial in causing psychological complaints: Cognitive Fusion and Experiential avoidance. Cognitive Fusion means that ‘behavior is being regulated more and more by a complicated network of linguistic relations instead of direct experiences’ (Jansen & Batink, 2014). This fusion with thoughts leads to Experiential Avoidance: trying to avoid certain internal experiences (such as thoughts, emotions, feelings, memories), which can eventually lead to psychological complaints (Jansen & Batink, 2014).
THE 6 Pillars of ACT

ACT consists of 6 core processes, called the pillars. These are: Contact with the Present moment, Defusion, Acceptance, Self as Context, Values and Committed action. Together these create an increased psychological flexibility (see figure 7) [Harris, 2010; Jansen & Batink, 2014]. In Appendix 3 ACT, a short description of ACT and the 6 pillars can be read.

APPICATION OF ACT FOR Tinnitus

There are several reasons why I think ACT offers a useful approach in learning to live with tinnitus. These will be discussed below.

ACT Discusses Acceptance

ACT discusses acceptance as a separate, specific topic. It appears that people could use more support in accepting the sound, in either the EMC and UMC Utrecht courses (see Insights).

ACT Discusses Attention

ACT discusses attention elaborately. Mindfulness, which is one of the ACT processes [Cullen, 2008], is sometimes characterized as ‘attention training.’ Understanding and gaining control over your attention is of great relevance for people with tinnitus.

ACT Discusses Awareness

Using techniques from CBT to help people deal better with their tinnitus can be difficult for somebody. In order to actively control your attention, you need to first become aware of your attention. In order to actively change your thoughts about tinnitus, you need to first become aware of those thoughts. In order to actively change your attitude towards tinnitus, you need to first become aware of your attitude towards tinnitus (see Insights). Becoming aware of these normally automatic processes creates room for change: it helps you see that there are other ways possible to deal with tinnitus.

ACT confronts you with attempting to control certain events in life. According the ACT-model something becomes a problem for you when you try to control or avoid it while you do not have the power to do so (Jansen & Batink). Realizing this is the first step towards change. Many people with tinnitus (subconsciously) seek control in different ways, which can hold back improvement of their situation (see Insights).

APPLICATION OF ACT

Research showed the effectiveness of ACT with a diverse range of clinical conditions, such as depression, anxiety, stress, addiction, eating disorders, schizophrenia, borderline [Harris, 2014] and chronic pain [Cullen, 2008]. For some of these applications (e.g. depression and anxiety) specialized applications are being developed. However, this is not (yet) the case for tinnitus [A. Lieftink, personal communication].

ACT and Tinnitus: research

There are researches that suggest acceptance-based therapies can reduce tinnitus distress [Hesser, Westin, Haves, & Andersson 2009; Westin et al., 2011; Philippot, Nef, Clauw, de Romrèe, & Segal, 2012; Hesser, Westin, & Andersson, 2013].
**Do what is important, interesting, fun**

If people would conclude for themselves that tinnitus is not worth paying attention and energy to, but instead do what they like and want: that would mean a big step of improvement. This the essence of ACT: ACT helps you do what is important, while taking along the inevitable pains in life (Harris, 2010), in this case tinnitus.

**Influence of thoughts or dealing with thoughts**

ACT can help against worrying and handling your thoughts [cognition] in a different way than CBT. Where CBT aims to change the content of thoughts, ACT aims to change the function of those thoughts [Harris, 2010].

Using cognitive techniques [CBT] to change the content of your thoughts into more realistic ones can help, but might not be enough. It does not support you in dealing with thoughts that are completely realistic and very intrusive [e.g. ‘the tinnitus sound is so loud I cannot hear anything’]. ACT can offer practical techniques for those situations.

**Experiential by nature**

ACT is experiential by nature, not didactical. It focusses on ACT-ing [Harris, 2010]. It makes abstract processes such as ‘acceptance’ practical. This fits well with treatment of tinnitus as it is an active process you should enter into [see Insights]. Acting is the focus for this project [see Design goal].
CHAPTER 8

IMPLICATIONS FOR THE DESIGN

This chapter describes implications [wishes, requirements] for the design that follow from chapter 7 Design Goal and Vision and chapter 8 Content: ACT

The design will be introduced during the information meeting and people take it home to use
They will work with the design independently.

The design should be available to and useable for all course participants
Everyone who visits the Erasmus MC with tinnitus complaints should be able to make use of the design if they wish to. It is a very diverse target group, that predominantly consists of elderly people.

The design will contain practical and concrete assignments, exercises or activities
The design should contain instructions for people that they can execute as soon as they get home after the information meeting. The design will therefore contain practical assignments or exercises so that people do not first have to search for activities that they can do.

The design should fit with the resources that the EMC can offer
This includes not only little involvement of EMC personnel during the use of the product by the user, but also low maintenance. Next to that, the design should aim to use as few expensive, complicated technologies as possible and instead focus on cheap, simple [production] technologies, materials etc.
The attitude towards tinnitus that you want people to adopt [see Insights] by means of the design, should be reflected in the design (and fit with the chosen form). This paragraph explains the implications this has for the design.

**The design should present tinnitus as something neutral, that is just there**
The design should present tinnitus as something quite neutral. The design should not stimulate the user to avoid tinnitus, nor to embrace it. It is important that the design presents tinnitus without judgement.

**The design should present tinnitus as something that can be quite a burden**
It should not make tinnitus a bigger or more complicated problem than it is for somebody ['oh I am offered a complete treatment, a full package: it probably is something severe, I should put a lot of effort in this']. Not everybody needs that so that might aggravate the situation.

On the other hand, the design should not deny the problem, or make it look easier than it is to somebody. In that case, people will not feel addressed and not understood. It should recognize the problem tinnitus is to somebody.

**The design should communicate that improvement of the situation is very well possible**
Giving people something to work with on their own, communicates that there IS something that can be done to reduce the experienced hindrance. As opposed to the message many patients receive from the ENT-doctor.

**The design should present tinnitus as something you can do something about**
Giving people something to work with on their own, also communicates that there is something YOU can do: it is up to you.

**The design should send the message that you can work on it**
The design should communicate that you can do something about it, but you do not have to. It should not stimulate people to do more than necessary: otherwise people will be occupied with tinnitus in order to learn not to be occupied by it.

**The design should be optimistic, light, attractive and refreshing**
The attitude of the product should be optimistic and light, while acknowledging difficulties that can occur. It should clearly elicit a positive feeling of improvement of the situation. This will make the design more attractive and inviting to work with. It should not exaggerate this and pose the problem as fun or easy.
A COMPREHENSIVE APPROACH

STARTING POINT OF THE CONCEPT

The psychological treatment of tinnitus targets its consequences [see Psychological Treatment]. There are numerous consequences [see Insights]. What consequences should the design aim to decrease. What should the design actually offer, and therefore contain? The answers to these questions will be presented here and form the starting point for the concept.

THE DESIGN SHOULD OFFER SOMETHING WITH WHICH PEOPLE CAN TACKLE ‘ALL’ POSSIBLE CONSEQUENCES OF TINNITUS

There are two reasons for choosing this comprehensive approach.

Tackling a specific consequence will probably not result in less experienced hindrance

For example: Addressing the problem of sleeplessness will not necessarily solve the issues with tinnitus. Someone might sleep better, has more energy and therefore can deal better with tinnitus. Though his tinnitus will not necessarily be less intrusive. He might still pay a lot of attention to his tinnitus or might still want it to be gone, thus attributing a negative meaning to the sound.

This is because consequences are linked to each other. For example: worrying or rumination can lead to sleeplessness. Sleeplessness makes you tired and therefore you cancel social events.

For this reason it is not a valuable solution to tackle one consequence, but the design should address a ‘complete’ range of consequences. The best chance of improvement is to offer a comprehensive approach.

The needs of the target group are diverse

The target group of the design, the participants of the EMC information meeting, is very diverse [see Insights] and participants experience all kinds of consequences.

As the information meeting aims to help everyone, a wide view is taken on tinnitus and its consequences. The design, which is a continuation of the information meeting, logically builds on this view and therefore aims to tackle ‘all’ consequences.

THE DESIGN WILL INCORPORATE EXISTING TOOLS

There exist many different practical things [exercises, activities, techniques, assignments] that people can do to decrease their experienced hindrance [see Insights]. These existing ‘tools’ come from psychological therapies. From the existing tools, only the practical ones will be included in the design to enable people to act immediately [see Design goal]. There is no need to develop new exercises or activities.

Consequences for the design

The diversity of tinnitus-evoked consequences and personal preferences makes that the number of tools is so large, that it is impossible for the design to offer all. There are too many different specific tools [e.g. a specific advice to make adjustments in your working environment to be able to better deal with your tinnitus] and there are tools that are very comprehensive [e.g. a course of yoga].

Therefore a selection of tools has to be made, while still forming a ‘complete’ set. This lead to the concept: a tasting
Chapter 10

CONCEPT - A TASTING

This chapter explains the concept of a tasting. It is based on the design goal and vision and it offers a comprehensive approach to tinnitus, as explained in the previous chapter.

A tasting

During a tasting, people are offered a small bite of several different things which they can taste: try out and experience. If they like something, they can get more of it. If they do not like something, they will not.

For the concept, this analogy works as follows:
[1] The design will offer an overview of different themes, that consist of tools. These can be relevant and helpful in the process of learning to live with tinnitus.
[2a] [2b] The design will offer an experiential introduction to these themes, for people to try out (taste).
[3] The design will invite people to choose what they want to try and explore in their own way.
[4] The design will help people to find more, if they find a something they like.

In the next section I will explain the different parts of this description separately.

10.1 Explanation of the concept

[1] THE DESIGN WILL OFFER AN OVERVIEW OF THEMES [AND TOOLS]

The design will contain different 'tools' that can be relevant and helpful in the process of learning to live with tinnitus. These tools are practical things people can do: exercises, techniques, activities, assignments, etc. These tools are grouped into themes. Each theme addresses a group of consequences.

This allows people to have an (complete) overview and gain an understanding of the possibilities.

Each theme addresses a group of consequences

Different levels of consequences can be distinguished. For example: lack of energy → sleeping problems → not being able to sleep → being annoyed by the sound when you try to sleep. The design will stay to the 'core' of consequences as much as possible in order to address the bigger general occurring themes; groups of consequences. The design will not become very specific or detailed, as people will work with the design on their own, without the interference of a therapist. The number of themes should be limited to offer overview.

An example

There are many consequences that can be caused by [amongst other things] a lack of relaxation. For example: sleeplessness, concentration problems, cancelling a social dinner etc. If you could support people in finding relaxation, all these consequences could decrease, thus addressing a group of consequences with one theme. These themes 'stay to the core of the problem', and do not go too much into detailed consequences.

All themes together form a 'complete' set

Only tackling a lack of relaxation, will not solve the problem [see previous chapter]. Therefore the design will contain several themes that address groups of consequences in order to offer a 'complete' set. The content of this will be discussed in the next chapter.
THE DESIGN WILL OFFER AN EXPERIENTIAL INTRODUCTION TO EACH THEME

The design offers an experiential introduction to each theme. It will not offer everything, but just a little bit; a small bite. An introduction allows people to try out all these different themes. This helps them in discovering their own (new) way of living with tinnitus.

It is impossible for the design to offer ‘everything’

As the design should address ‘all’ consequences, it should include many different ‘tools’ to tackle these consequences with. This will be too comprehensive. Therefore the design will include experiential introductions, small bites, of these tools.

Keep it small and manageable

It should be a small and simple gesture (see Vision). The design targets all the participants of the information meeting. It should be the first step after the course and just help people into the right direction. It should not communicate a comprehensive treatment (see Practice what you preach).

Offering too much would be overwhelming and people might get lost in the design. This is undesirable. Offering little bits of different things makes the design manageable.

Make different tools and techniques accessible

Including introductions to different tools and techniques that come from therapies make these easily accessible for people to try out and get to know about. Moreover, these tools can be adjusted to the needs of the target group. The target group does not need psychological treatment and the design does not aim to replace therapy. If someone were to need that, they should receive that, and not the design. Therefore an introduction will be sufficient.

THE DESIGN WILL OFFER DIFFERENT TOOLS FOR THE SAME GOAL

The design will offer different options to work on a theme, a group of consequences. This allows people to explore and discover what suits them.

All roads lead to Rome: explore and discover your own

People do not know what will work for them (see Insights). Only by trying out (new things) and experiencing, you know what will work for you and you can gain new insights (see Insights). By offering different practical options for people to explore and discover they can find what suits and helps them. For example: relaxation can be gardening for one person, yoga for another and reading for a third.

Offer something for everybody

Different people have different needs and different preferences. Offering different options that target the same issues, ensures that something for everybody is included.

THE DESIGN WILL OFFER NO FIXED PROGRAM

The design will have a flexible set-up: there is no fixed order of themes (nor tools). There will be no program for people to follow: it is up to people to choose what to do. This allows people to explore and discover options in their own way.

The design should allow a personal choice and order of themes (and tools)

Not everything is relevant for every person

People experience different tinnitus-evoked consequences (see Insights). Some of the themes offered might not be relevant for someone and therefore they should not have to use it. For example: not everybody experiences consequences regarding changed behavior towards external sounds. A flexible set-up can respond to personal needs.
There is no standard or optimal order for the themes to be offered

People should be able to start working on the issues that are most relevant for them personally at that moment. This differs from person to person [and from time to time].

The design should enable people to work with different themes simultaneously

For the same reason that the design should offer a ‘complete’ set, people should be able to work with this ‘complete’ set. This means that the design should allow people to work with different themes at the same time. Making this possible, increases the chance of improvement.

The design should allow and invite the user to choose and to act of their own account

Offering no fixed program, asks for an active, explorative attitude of the user

As the view on treatment is to have people become able to cope independently, you do not want to guide them too much and instruct them what to do next. That might make a person adopt a passive, dependent attitude.

A flexible set-up asks for an active and explorative attitude from the user. It stimulates the user to explore and find their own way. It also communicates that the process is about attaining skills, an attitude [see Insights], rather than things to cross off a list and you are done.

By offering no fixed program, people will feel more free to do what they want

Otherwise people might think they should put a lot of effort in it to improve their situation. Offering no fixed program communicates that you do not necessarily have to do much, only if you want to. Also if one little thing is enough for you, that is fine. It makes it an open invitation [see Vision].

[4] THE DESIGN WILL HELP YOU CONTINUE YOUR JOURNEY IF NECESSARY OR DESIRED

It can be that somebody finds something, a theme or a tool, that they like, but the design does not offer enough of it, as it contains introductions only. In that case the design will support them in finding more information, exercises, activities or guidance. This allows people to find more than what the design has to offer, if they need or want that.

Offer different options works as a starting point to understand the principles

By offering different options with the same goal, the idea is that people will be able to understand the principles behind helpful activities [see Insights]. This might enable people to find more helpful activities that suit them outside of the design.

Offer suggestions for more information, exercises, activities or guidance

The design can only contain a small amount of all helpful tools that exist. You want to enable people to find more of these if they might help. The design will help them find more.

As somebody has already experienced a little what might suit them, it lowers the threshold to commit to something more comprehensive, for example subscribe for a course (yoga, mindfulness etc.). It also helps you select the right things and not get lost in all options that are offered, for example online [see Insights].
CHAPTER 11

FROM CONCEPT TO DESIGN

In the previous chapter I explained the concept of a tasting, and how that expresses itself in four different aspects of the design: overview of themes and tools; an introduction to these different themes and tools; flexibility in use and finally further information. This chapter looks into what those aspects imply for the content of the design. From this content follow certain requirements to take along in the development of the design.

11.1 Ten Topics

The design consists of different topics

One of the four aspects of the design is that it should provide an overview of themes, groups of consequences evoked by tinnitus. Sometimes a theme can be addressed by two different approaches. For example: the theme ‘thoughts’ can be addressed with either a CBT approach or an ACT approach. This is why the term ‘topic’ is introduced in the design. It addresses one theme and offers one approach to it.

Offer a minimum while being ‘complete’

The design aims to offer a limited number of topics in order to keep it simple and maintain overview. Yet, it is very important that together these topics form a ‘complete’ set (see previous chapter). I found the selected ten different topics (see figure 8) fulfill this wish.

Every topic serves one purpose or skill

Every topic consists of tools, all supporting in achieving one goal or practicing one skill. This is important as it keeps the classification clear and understandable. Every topic has a name, referring to that specific goal or skill. From only reading this name, its purpose should be clear, without going into the content of them (yet).

Together all different topics offer an overview: they inform about the different aspects that can be of influence on tinnitus related complaints. Giving this overview might help people to see their tinnitus-complaints are more than just the perception of a sound (see Insights). This helps them to improve their situation.

Requirements regarding the name of a topic

The names of the topics should consist of simple, plain and relatable words. They should not contain any jargon. It is important that people understand them immediately and easily. If possible, the names should be formulated actively (using a verb), to emphasize the message of action.

THE CONTENT OF THE TOPICS

It is not up to me to determine the content of the topics. This should be done by a psychologist. However, in order to work out the design and to clarify the format, I will give a suggestion of the content.

10 Topics

Figure 8 shows my selection of topics to be included in the design. In total 10 in number. Together, these topics should form the ‘complete’ set. This selection of topics has been discussed with the client.

Relaxation – Ontspannen
Attention – Aandacht trainen
Sound Enrichment – Omgaan met geluid
Exposure – Ernaar luisteren
Cognitive Techniques – Gedachten veranderen
Creative Hopelessness – De illusie van controle
Acceptance - Ruimte maken
Defusion – Kijken naar je denken
Current Moment – Hier en nu zijn
Values and Committed Action – Doen wat goed is

Figure 8: The topics and their names
In the figure, suggestions for the names of the topics as they can be used in the design are mentioned in Dutch.

**A remark on the choice of topics**

The design will offer a combination of different therapies: CBT and ACT. The two therapies offer different approaches to consequences that people can experience. Offering different options corresponds with the concept of a tasting.

I think someone can benefit from one approach, while someone else benefits from and prefers another. Even more, I think people can benefit from both approaches at the same time. For example constructive thinking and defusion both deal with thoughts (regarding tinnitus). The two approaches do not necessarily rule one another out, but can possibly even enhance each other.

**11.2 The main elements of the design: exercises**

**There are numerous ways to fill in each topic**

The design should provide an introduction to each topic (second aspect of the concept), each having its own goal or skill. This goal or skill can be practiced in many ways, using many different tools. As it is very personal which one suits, the design will contain different types of tools.

**Each topic consists of a maximum of 10 exercises**

In the design, these tools will be called ‘Exercises.’ These exercises are practical instructions that people can follow, and enable them to act and experience (see design goal). As each topic of the design is an introduction, it should not include too many options. Yet, it should contain a wide variety of options. A maximum of 10 different exercises seems reasonable. This number gives enough room for the desired diversity and enable people to find what suits them. It also allows people to really practice that topic, while keeping it small and maintaining overview.

**THE EXERCISES**

Again, it is not up to me to determine which exercises should be included in the design. To illustrate the format [see next chapter] I have chosen one exercise to work out.

**Some remarks on the exercises to be included**

*The exercises should form a diverse set*

In order to show what is possible and to include something for everybody.

*The exercises should aim to give people insights by exploring and discovering things about their tinnitus*

The design should include exercises that stimulate people to do ‘right,’ helpful things. For example: help find relaxation. Next to that, the design should stimulate to gain insights. For example: a well-intended advice can be ‘do not pay too much attention to it, that is the best thing you could do.’ These are good advices, but can be difficult to apply and experience in that way. The design should guide this process by containing exercises or evaluating exercises that stimulate people to explore aspects related to their tinnitus. For example: a focus exercise, that makes them experience the influence of attention on their tinnitus. In this way the design will not be pedantic, but stimulate people to discover things for themselves.
IMPLICATIONS FOR THE DESIGN

The following implications for the design follow from the choice of content.

The exercises mainly consist of text

The exercises consist of instructions: text. These instructions can either be written down or spoken or recorded.

Contain sound files

Many of the exercises that I would include in the design require a spoken or recorded text: they are guided exercises. Therefore the design should contain sound files.

Practice regularly

The included exercises differ greatly. Most exercises become most effective when practiced more often or on a regular basis. The design should enable this and it should allow people to integrate the exercises in their daily life. It should also communicate the desired use of the exercises.

ADDITIONS TO THE EXERCISES

People should be able to do the exercises included in the design independently. To enable people to do this well, the design should offer some support.

Not only support in what people can do, but also in what way

It is very important to offer support in working with the exercises: the design should not only contain instructions of exercises, but also advice and support in how to work with those exercises: in what way, with what motivation, when, how often, etc. [see Insights].

For example: Imagine someone understands that it is important to relax and he has different exercises that he can do to relax. He does an exercise once and checks whether his tinnitus has become less. It has not. He thinks the exercise does not work and does not try it again. This is not an effective process. Therefore it is important to offer support in how to work with the exercises.

It is important for people to be able evaluate the exercises and know whether they are doing well or if they should adjust something: get feedback. This will also give them confidence in working with the design on their own ['did I do this exercise right?' 'What am I supposed to notice?']. People should understand the purpose of the exercise and they should be guided in reflecting on it.

Tips and Pitfalls: keeping people on the right track

The design will support people in how to deal with the exercises on three levels:
1. About a specific exercise [e.g. we advise you to do this exercise daily]
2. About a topic [e.g. it is important not to use this skill as a way of controlling the situation]
3. About the whole, working on your tinnitus in general [e.g. it can take a while for these exercises to have a noticeable effect]

The design should enable and support these activities. It should never try to direct or control it. It should be kept open and free for people to use if they want to. It should be inviting and not patronizing or suffocating.

Support in discovering other exercises and topics

It will be up to the user to choose what exercise of what topic they want to do. The design will support people in doing this by advising certain topics or exercises.
11.3 Flexibility in the design: no fixed program

**Working with different topics simultaneously**

The design will make it possible to work on different topics at the same time (third aspect of the design).

**There is no fixed order in the exercises**

Similar to the topics, there is no fixed order in the exercises. There is no best order for exercises to be done and people should explore them according to their personal needs and preferences.

**The design should enable and stimulate a flexible use of the exercises, while maintaining overview**

The design will contain around 100 different exercises for people to explore. It is important that overview is maintained: what exercise is from what topic, what exercises am I committed to, which ones did I like, etc.

11.4 Enable to find more: In-depth information

As the design will be an introduction, in-depth information will be included to enable people to find more about a certain topic or exercise (fourth aspect of the concept).

If people have tried a type of activity or a [part of a] therapy that suits him, the design will help him to find proper additional information.
PART III DESIGN
CHAPTER 12

THE TINNITUS TOOLKIT

In this chapter the aspects from the concept will be worked out resulting in different components of the design. Subsequently the format of each component will be explained as well as the materialization. This chapter concludes with the final design and use.

12.1 Components of the design

This part looks into what requirements and wishes there are that are guiding in how the content takes shape, resulting in the different components of the design.

The design will be physical

The main content of the design, the exercises, consists of text. This will be printed, not digital, for the following reasons.

Printed matter is easy to use and does not require any device. As not all course participants have a computer or a smartphone, the choice for digital means would rule out people (A. Lieftink, personal communication). In printed format the design is accessible and familiar to all people.

A physical design fits with the limited resources of the EMC. It is more complicated and expensive to set up a website or an app and to maintain it, compared to a physical design.

A physical design means that people will be given something tangible that can help them, to take home: not a website link on a paper for example. I think a physical design might reassure people better.

A physical design is passive, which requires the user to act. The user will know, from looking at it, that he has to be the one to act. This fits with the design goal.

Every topic will stand on its own

All ten topics stand alone, allowing people to choose their own topic(s) to work on. This implies that everything that is needed to work with a topic has to be put together physically. This applies to every topic. It is practical to have everything you need put together: in that way you do not have to search for something or take out all the other topics when you just want to practice one. It enables and promotes flexible use. It allows you to compose the different topics in your own way.

All necessary sound files will be put on one CD

There is one exception to this. Some of the exercises require sound files. These sound files will be put together on one carrier, as this requires least materials and reduces the number of components thus simplifying the design. Even though this means not every topic stands on its own.

As a digital file carrier a CD is chosen, as this is a product everybody of the target group is familiar with and can use.

Each topic will have the same structure, composition and layout

Each topic is very different in its content and in its preferred way of working with it.

Some topics could be called skills, e.g. Acceptance or Current moment, that you want people to practice regularly. Others, e.g. Values, are more one-time topics to do. Also the exercises differ a lot: some of the exercises will be most useful when practiced regularly for a period of time. Others are fine to do
only once. Some exercises take little time, others take considerable time. The type of activities also varies from mental to physical.

The structure, composition and layout of every topic (and all its components) will be the same for all topics. In this way, the structure of the design will have to be explored only once by the user, allowing him to focus on the content. The user should not be distracted by the form. Therefore it should be predictable, recognizable, simple, clear and calm, supporting the content to be conveyed.

**THE COMPONENTS AND THEIR RELATIONS**

This part explains the different components of the design, their function and relations.

**Structure of a topic**

Every topic consists of the same components, that together provide everything the user needs to practice that topic (except for the cd). There are 3 components to a topic: the exercises, tips & pitfalls and in-depth information.

**Exercises** The core components of the design are the exercises. These are the first step in working with the design. Each topic contains 10 exercises that serve the same goal: the topic. The exercises are supported by tips on how to work with them. All exercises should be presented as equal: there is no first or best one.

**Tips & Pitfalls** All the exercises of one topic are supported by tips and pitfalls. Practical advices, such as how to use the different exercises, and references to useful exercises or topics are given. They support in practicing the whole topic and are not specific to an exercise.

**In-depth Information** In-depth Information is for somebody who wants more than is included in the design. Suggestions are given for ‘expansion’ of the activities that are included in the topic.

**Everything together**

**Topics** The 10 topics should be presented as equal: not one is more important than another and there is no order in them.

**General Introduction** There will be a general introduction to the design included as well. It will contain, amongst other things, advices on how to work with the different components design. This will therefore support all topics.
12.2 Format of the design

OVERVIEW OF THE PHYSICAL COMPONENTS

The design of the toolkit consists of 8 different physical components. Figure 9 shows these components.

In the next sections each component is discussed separately. It explains and describes their form, structure and format. First, I will start with the core component of the design: the exercises.

Figure 9: The different components of the design.
1 EXERCISE CARDS

Use and Function

Step 1 Inspire - People will be offered different exercises, without an order. They will have to choose one to execute. To support them in making that choice and exercise should attract attention and give an impression of the type of exercise (‘What am I going to be doing? How much time does it take? Could this be something for me?’).

Step 2 Instruct - When people are interested in a certain exercise, I want them to be able to immediately get going. Therefore, practical instructions are given to execute the exercise.

Step 3 Inform - After having done the exercise, people should be able to evaluate it and know what to do with it. Therefore the design should:

- support people in reflecting on the exercise
  - How did it go? Did I do it right? What is supposed to happen?
- inform people on the importance and purpose of the exercise
  - What is this exercise for? What are its benefits? Why should I do this?
- advice people on how to use or implement the exercise
  - How can I go about this exercise? When and how often should I do it? What should I pay attention to?

It is important that the design should stimulate people to first execute and experience the exercise, and discuss and explain it afterwards.

Shape: Card

Each exercise will be put on a single card, containing everything required to execute and evaluate that exercise.

There are several reasons for choosing a card:

- It supports the fact the there is no order in the exercises.
- Including everything needed to execute and evaluate the exercise on one component allows for flexible use.
- A card enables a personal use: you can compose your own selection.
- A card has an association with action. That is important. If it were a book, it would communicate that it is something you are supposed to [sit down for and] read.
- A card is the most simple form. It is cheap to produce and everyone is familiar with it. It is an open form as it shows at a glance all there is to it: front and back.
- A card is compact: there is not much space to put text on. This makes it more accessible and inviting for people to start working with it, as they can immediately tell it does not require much reading. The design is about acting, not about reading.

The cards will be kept together on a pile, being the most compact and practical.

Rounded corners

The exercise cards will have rounded corners. This is done usually to protect printed matter during frequent use. Therefore this will strengthen the association with action.

Horizontal layout

The cards will have a horizontal layout because that feels more calm and relaxed then a vertical layout. Also, it feels more accessible to read, as the pieces of text are short.
<table>
<thead>
<tr>
<th>FRONT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOPIC COLOR</strong></td>
</tr>
<tr>
<td><strong>TITLE OF THE EXERCISE</strong></td>
</tr>
<tr>
<td><strong>SHORT DESCRIPTION OF THE EXERCISE</strong></td>
</tr>
<tr>
<td><strong>ICON: ACTIVITY</strong></td>
</tr>
<tr>
<td><strong>ICON: TIME</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOPIC COLOR</strong></td>
</tr>
<tr>
<td><strong>ICON: REFLECT</strong></td>
</tr>
<tr>
<td><strong>REFLECT</strong></td>
</tr>
<tr>
<td><strong>ICON: ADVICE</strong></td>
</tr>
<tr>
<td><strong>ADVISE</strong></td>
</tr>
<tr>
<td><strong>ICON: INFORM</strong></td>
</tr>
<tr>
<td><strong>INFORM</strong></td>
</tr>
</tbody>
</table>

Figure 10: Format of the Exercise Cards
Structure, format and layout

Step 1 and 2 will be put on the front side of the card. Step 3 will be on the back.

Step 1 Inspire

**Title** - The name of the exercise.

**Short description** - There will be a description of the goal of the exercise in 2-3 sentences. It is meant to inform people and act as a teaser.

**Topic color** - Every topic will have their own color and all components of that topic will have that same color. Also the name of the topic will be mentioned on every component of it.

All cards of one topic will have the same color as that topic has, remembering the user of its purpose. Because of this color, all cards of one topic can be kept together easily.

**Icon: Activity** - In order to have people form an image of what type of activity a certain exercise is, an icon will be used. For example a writing, listening or a physical activity. This icon will also illustrate that the purpose is to do something, and not that the card is for reading only.

There are many different exercises and activities: it will have to be decided per exercise what the icon should depict, if the content is developed.

In detailing, it is important that the icon depicts a person doing something, so that the user can identify himself with the drawing. For example: for a listening exercise it should not depict an ear only, but a face with an ear, preferably including eyes. The icon should be clear: understandable without explanation. The final icon examples can be found in the chapter Final Design.

**Icon: Time** - There will be an icon to give people a visual indication of the time needed to do an exercise. Two aspects of time are important: duration and frequency.

*Duration – an indication of the time it takes to do one exercise once*

It can differ a lot per person how long it takes to do an exercise. Therefore an indication of the duration is given.

**Three categories of duration**

- 1. Exercises that can be done between times and do not require any planning (for example: informal mindfulness exercises, ‘ik heb de gedachte dat...’).
- 2. Exercises that are somewhat in between the other categories.
- 3. Exercises that take up much more time and you really have to schedule (for example: formal meditation exercises, making a plan, values).

Three categories is a manageable number: it gives an useful indication, while not becoming too specific. The design of the icons can be found in Chapter Final Design.

**Frequency – the advised frequency of execution of the exercise**

There will be an icon that indicates the advised frequency of use. This is again an indication, though it should be clear, otherwise it would not add anything.

**Three categories of advised use**

I have come up with three categories to be consistent:

- Often
- Regularly
- Sometimes

The design of the icons can be found in Chapter Final Design.
Step 2: Instruct

**Title** - 'Opening'. This title will be the same for every exercise card. It is short and clear. It sounds friendly and neutral (more friendly than ‘instructies’ [instructions] for example).

**Icon: Activity** - This icon also assists in executing the exercise as it gives an example of what to do.

**CD: number** If the CD is required for the exercise, the required number to play is displayed on the card.

**Instructions** - The text will be split up in steps (step 1, step 2, etc. in bold): clarifying in one view that these are the instructions for you to follow. The instructions should be clear, concise and friendly.

Step 3: Inform

This part consists of three sub-steps: Reflect, Explain and Advise. These steps are the same for every exercise and so are the headings. The headings are formulated as a question, directed at the person doing the exercise and they are put in present tense. In this way, the user is addressed.

**Icons: Reflect, Explain and Advice** For each sub-step a small icon will be used to support it visually. It also makes this side of the card more attractive and accessible, as it contains a lot of text.

- **Reflect: a question mark in a speech balloon**
  It resembles somebody asking you questions for you to think about.

- **Explain: an ‘i’ in a light bulb**
  It gives you information, the ‘i’, that aims to bring you insights, represented by the light bulb.

- **Advice: a compass**
  Information given in this part helps you find your way, but does not tell you what to do: it advises you, in a way a compass does.

The design of the icons can be found in Chapter Final Design.

Step 3a: Reflect

**Title** - Wat merkt u op?
It is an open question, and asks for an open answer. Just observe, not judge.

A few questions for reflection and evaluation of the exercise. It should be just a few questions not to confuse somebody. These questions steer the way you want people to think and pay attention to in the exercise. Indirectly they inform about the exercise.

Step 3b: Explain

**Title** - Wat betekent dit?
This part explains about the exercise: what people might have noticed during the exercise and what the purpose of the exercise is.

Step 3c: Advice

**Title** - Hoe kunt u hiermee aan de slag?
This part advices into more detail how you can continue practicing that specific exercise: for example when, how long or how often. It depends on what is relevant for that exercise.

What follows are some practical tips and pitfalls, specific for the exercise. With every exercise there are some ‘standard’ tips and pitfalls. These can be included here to support people in practicing that specific exercise independently.

The tips will be organized using bullet points. This breaks the text into more accessible short pieces and identifies the content immediately as tips.

Example Text Exercise Card

An example of the text for an exercise card can be found in Appendix 4 Example texts. An example of the final design of an exercise card can be found in chapter Final Design.
2 TIPS & PITFALLS

Use and Function

Tips & Pitfalls consists of information that supports people in practicing a topic. It is meant to be used when people have been practicing with exercise[s] of a certain topic for a while. Therefore it is desired that people read this information regularly. As this information has its own function and use, it will be a separate physical component in every topic.

STEP 1 ENCOUNTER

Step 1A Attract attention - When somebody is working with the exercises, they should already know that this information is present in the design. Therefore it should attract attention, but the focus should remain on the exercise cards.

Step 1B Inform - The next step is to inform people about the use and function of this part, so that they know when to take it out for use.

STEP 2 USE

Step 2A Inspire and Address - When people are going to use the Tips & Pitfalls, they should feel addressed and be able to find the relevant tips and pitfalls for them easily, as not all tips and pitfalls will be relevant. They should be motivated, curious to read the information.

Step 2B Instruct and Inform - Once they have found the relevant content, it should explain, support and instruct people so they know if they are on the right track or how they can improve.

Shape: 4 - panel accordion fold

The chosen form of the Tips & Pitfalls component should communicate that it supports in practicing with the exercise cards. A 4-panel accordion fold is chosen as it basically equals 4 cards put together. It communicates an active use. When folded, it has the same dimensions as the exercise cards, including the rounded corners.

A 4-panel accordion fold is accessible and simple to produce. When unfolded, by a quick and simple movement, it gives an overview of all of its content. Similar to the exercise cards, this is open and honest: it has nothing to hide. It allows the user to quickly oversee all information, and thus be able find what is relevant to him.

The Tips & Pitfalls folder will be put at the back of the pile of exercise cards. When people browse through the exercise cards, the folder will stand out as it is a pile of cards. In this way it attracts attention and people know about it.

In the design this component will have 4 panels. I think a lot of information can be put on it, without becoming overwhelming. Whether it offers enough space, or maybe too much, will be clear when the content is there.

Vertical Layout for the content

A horizontal layout for a 4-panel Accordion fold is not nice nor useful, therefore the layout will be vertical.
Figure 11: Format of the Tips & Pitfalls folder
**Structure, format and layout**

Step 1 will be put on the cover of the folder. Step 2 will be on the other pages.

**Step 1A: Attract attention**

**Title** - Tips & Valkuilen – [Topic name]

The cover of the folder will have the title horizontally oriented, similar to the exercise cards. So when people browse through the pile of cards and this folder, the title can be read.

**Topic color** - To indicate the topic.

**Step 1B: Inform**

**Description** - This will be a short description of the content and its intended use. It will be the same for every Tips & Pitfalls folder of every topic.

This text will be put in the vertical orientation, so that the user will turn the folder already to the right position to be able to read the rest of the content, while reading the cover page.

**Step 2A: Inspire and address**

**Image** - Every tip, a block of text, has a little drawing next to it to attract attention and to liven up the folder. Only text will make it very serious. The drawings depict people that experience a certain situation in which they could use help: the situation the user might recognize. It makes the folder empathic.

**Quote/Thought** - Next to the drawing, is a thought or quote, of the figure in the drawing. It will be formulated in the 'I'-form, for the user to recognize. If so: the explanation below is probably relevant for them.

**Step 2B: Instruct and Inform**

An explanation of the situation is given, including practical tips on how to deal with it. If applicable, at the bottom there will be a reference as an advice to a specific exercise or topic to practice that might help you in that situation.

**Example Text Tips & Pitfalls**

An example of the text for a Tips & Pitfalls folder can be found in Appendix 4 Example texts. An example of the final design of a Tips & Pitfalls folder can be found in chapter Final Design.
Figure 12: Format of the in-depth Information folder
3 IN-DEPTH INFORMATION

Use and Function

The In-depth Information enables and supports people in searching for more information than is included in the design. This information becomes relevant after some time of practicing: it is a different type of activity. As this information has its own function and use, it will be a separate physical component in each topic.

STEP 1 ENCOUNTER

Step 1A Attract attention - When somebody is working with the exercises and Tips & Pitfalls, they should already know about this information being present in the design. Therefore it should attract attention, but the focus should remain on the exercise cards and the Tips & Pitfalls folder.

Step 1B Inform - The next step is to inform people about the use and function of this part, so that they know when to take it out for use.

STEP 2 USE

Step 2A Address - When people are going to use the In-depth Information Folder, they are searching for specific information. They are likely to have some idea of what they want (e.g. more exercises, more guidance), as they have experienced something is missing for them in the design. They should be guided to find this information easily.

Step 2B Inform - Once they have found the relevant content, it should explain and inform people so they know how and where to find what they want.

Shape: Map

The form of the In-depth Information folder should communicate that it is about searching more. Therefore a map was chosen. It will be folded similar to existing maps (see FIGURE XX), and therefore people are very likely to be familiar with it.

This shape was chosen for the following reasons:

• A map has an association of searching, looking for the place to go. This is exactly the type of activity that it should stimulate.
• A map, when folded out, gives an overview of everything it contains: it is open, plain and has nothing to hide.
• It is a bit cumbersome to use because of its size. This stimulates the user to take the time and sit down while using it.

The action of expanding the map refers to expanding your possibilities: it offers more, it is bigger than the other components.

When folded, this folder is lower than the exercise cards. It has the same width. This folder will be put at the bottom of the pile, below the 10 Exercise cards and the Tips & Pitfalls folder. They will be put all in one compartment (see explanation Topic Box). The idea is that the user will take out all components from the compartment in one move. Only this folder will remain behind, as it is lower.

By its different size, it communicates that it is not part of the practicing activity. It will attract attention, and therefore the user will get to know its purpose. Also, it is meant to be left behind, as it will become useful after some time of practicing with the other components.
Structure, format and layout

Step 1 will be put on the cover of the folder. Step 2 will be on the inside of the map.

**Step 1A: Attract attention**

**Title** - Verdieping – [Topic name]

The cover of the folder will have the title horizontally oriented, similar to the exercise cards. So when people browse through the pile of cards and this folder, the title can be read.

**Topic color** - To indicate the topic.

**Step 1B: Inform**

**Description** - This will be a short description of the content and its intended use. It will be the same for every In-depth Information folder of every topic.

This text will be put in the vertical orientation, so that it is similar to the lay-out of the Tips & Pitfalls folder.

**Step 2A: Address**

**Related Exercise card(s)** - The first thing to notice is about what exercise card[s] more in-depth information will be given. The user is looking for more information about the topic in general, or he might have a specific exercise he likes and want to know more about that one. He should be able to find this quickly.

**Question and Icon** - The next step consists of different questions. What kind of in-depth information is the user looking for? Here, different questions are put. They ask about whether a certain option is what the user wants. In this way the user will feel addressed and gets an overview of the possibilities.

A small icon will inform the user at a glance about the type of options of that question offers [e.g. books or apps].

**Step 2B: Inform**

**Explanation 1** - This part explains about the theory behind certain exercises or where they come from. It gives a little background information that is useful to be able to search for more.

**Practical Tips** - This part gives some practical tips and keywords to enable the user to search and find more.

**Example text In-depth Information**

An example of the text for In-depth Information can be found in Appendix 4 Example texts. An example of the final design of In-depth Information can be found in Chapter Final Design.
4 Topic Box

Use and Function

As described, all components of each topic will be kept together in one container.

Step 1 Inspire - People will be offered 10 different topics. It is up to them to choose which one to work with. Therefore each topic container should inspire people and make them curious to what it might contain and bring them.

Step 2 Inform - When a certain topic is chosen, some information about that topic and its relevance for tinnitus should be explained to help people practice. This information has already been explained during the information course. This information will probably be read only once, or a few times. Therefore not so much emphasis needs to be on it. It should be very concise, as the focus of the design is on acting and practicing.

Shape: Folding Carton

The three abovementioned components (Exercise cards, the Tips & Pitfalls folder and the In-depth Information folder) will be put together in a folding carton. The shape of this box can be seen in Figure 13.

• Simple shape
  It is easy to open: just a flap, no threshold (like a clip or anything). It is one component (no loose lid), to keep the amount of different components to a minimum. When closed, the components cannot slip out of the box. It is a plain and modest shape, nothing fancy or prominent.

• All components will be put on one pile in one compartment
  All attention will then be only on the top one, which is an exercise card, the main component of the design. It also simplifies the design of the topic box: it is uncomplicated, calm to look at and cheap to produce.

The order of the components in one Topic Box: on top ten Exercise cards, than the Tips & Pitfalls and lastly the In-depth Information folder.

• The components are covered only partly by the topic box when it is opened
  There should be an as big as possible amount of exercise card visible when opened: this communicates openness, honesty and is inviting. If less were visible it would feel closed and uninviting. If more were to be left uncovered by the box, this the box would make it feel flimsy and insecure, while it has to be sturdy and stable.

• Invites to take out all components
  When opened, the components stick out a little: it is the easiest to either take out only the top one, or the whole pile. It is inviting to take them all out and explore what is there.

• The Introduction text will be printed on the inside of the box
  The explanation about the topic and the relevance of it to tinnitus is relevant after you have become interested in the topic. This text will be put on the inside of the box, as you will only read this when you are interested in the topic and it will minimize the number of different components to the design: this keeps it simple and clear. It should not draw too much attention: the focus should still be on the exercise cards.
Figure 13: Format of the Topic Box
Size
The topic box will be slightly bigger than the exercise cards. All components should easily fit in, it should not be narrow.

Horizontal orientation
The topic box will have a horizontal orientation similar to the Exercise Cards.

Structure, format and layout
Step 1 will be put on the cover of the topic box. Step 2 will be on the inside.

Step 1 Inspire
Title - Name of the topic.

Description - The description is meant as a teaser for this topic. It will consist of a few short and simple questions, to make you think. Through the questions, it gives away a little bit of information on the topic: these are the things you will explore with this topic box.

Topic Color - The color coding starts on the outside of the topic boxes. When the topic boxes are put next to each other (see description box), each of them should clearly have their own color.

Topic name on the spine - This will give a nice overview of all topics, when they are put together in the box (see box description).

Step 2 Inform
Top of Exercise card - When opened, the title of the top exercise card can be read, the activity icon is visible, and the text ‘Oefening’ is visible. This communicates instantly that it is an exercise, something you can do. This should attract the attention first.

Main question - The title of the introduction is the main question to explore with that topic, addressed to the user.

Information and Icon - In this part a short explanation is given about the topic. To communicate this visually, a small icon is included. This also makes the layout more friendly. For every topic this text will start with: ‘Dit onderwerp gaat over [...]’, in bold typeface. In this way it becomes immediately clear what the content of that text is.

Relevance for tinnitus and Icon - Here the relevance of the topic for tinnitus is explained in short. A small icon is included, similar to the previous part. For every topic this text will start with: ‘Dit is relevant voor tinnitus, omdat [...]’, in bold typeface.

Example text Topic Box
An example of the text on a Topic Box can be found in Appendix 4 Example texts. An example of the final design of a Topic Box can be found in chapter Final Design.
Figure 14: Format of the CD folder
5 CD FOLDER

Use and Function

Almost every topic requires some sound files to practice with. These will be put together on one CD, which will be put in a CD folder.

It will be a separate component. In that way people can take it out of the toolkit and place it where they want, for example next to their CD-player.

The folder should contain a list of the numbers on the CD to enable people to find the right track.

Shape: Folder

Figure 14 shows the shape of the CD folder. It has been kept as simple and cheap as possible. It will be the same size as the topic boxes. In that way everything fits easily together in the box (see box description).

Horizontal layout

Corresponding with the topic boxes, the orientation of the CD folder will be horizontal.

Structure, format and layout

Cover

Title - CD Folder

Description - A short description is given of the content of this folder.

The cover will have a neutral color. This and its different shape, communicate that it is something different and that it does not belong to a specific topic, but supports all of them.

Inside

Topic name and Color - The numbers on the CD will be arranged according to their topics. The topics colors are used here to support this visually.

Exercises: name and duration - The names of the exercises as used on the exercise cards are printed here. Also the duration is included, in case people want to know how much time a certain track takes.

CD

Title - Geluidsbestanden. Tinnitus toolkit

Logo EMC - The logo of the EMC will be put on the CD.

Example text CD folder

An example of the text for the CD folder can be found in Appendix 4 Example texts. An example of the final design of the CD folder can be found in chapter Final Design.
Figure 15: Format of the Introduction folder
6 INTRODUCTION FOLDER

Use and Function

There should be an introduction to the design that explains what it is, what its purpose is and how you can work with it. There should also be general tips and pitfalls that people should be able to consult regularly. This information should be the first thing that people read and that they can read back later if they want.

Shape: Folder

The introduction folder will be one folded page, with the same dimensions as the topic boxes. In that way everything fits easily together in the box (see box description).

The text should be kept to a minimum to keep it inviting to read and to allow people to quickly get going with the exercises.

Similar to the other components, the introduction folder will have a horizontal orientation.

The introduction folder will be put on the outside of the box, underneath the wrapper (see description box and wrapper). This ensures that the user will first encounter the introduction folder.

Structure, format and layout

Front

Title - Introductiefolder

Description - A short description is given of the content of this folder.

The cover will have a neutral color. This, and the different shape, communicates that it is something different and that it does not belong to a specific topic, but supports all of them.

Inside

Welcome - A short welcome text to introduce the design and explain for who it is meant: people should feel addressed by this and know it is for them to use.

Purpose - The purpose of the toolkit should be explained here again, to prevent confusion and manage expectations.

Practical advices - This part will explain how you are meant to be working with the design, what attitude works best (e.g. explore and discover), to prepare people to get started and motivate them.

Explanation toolkit - In this part the different components will be introduced. A short description of their use is given. Practical questions regarding use will be answered (which exercise when?). The symbols used on the exercise cards will be explained here as well.

Back

Title - Tips

On the back practical tips regarding the use of the whole toolbox will be given.

Example text Introduction Folder

An example of the text for the Introduction folder can be found in Appendix 4 Example texts. An example of the final design of the Introduction Folder can be found in chapter Final Design.
Figure 16: Format of the Box
Use and Function

All the above mentioned components should be held together; this is what the box will do. It is practical for transportation (from the EMC to home) and also to store it somewhere when in use.

The box should protect the content, while it should still be easy and inviting to take out the components.

**Step 1 Inspire** - The design should inspire people to get to work with it. It should attract attention and make people curious.

**Step 2 Inform** - It should communicate the core message of the design, by only looking at the outside: there is something that can be done about tinnitus, there is something that you can do and it will help you decrease the hindrance (not a ‘solution’).

Shape: Rigid Box

It is a very compact and simple box (see figure 16). It presents the topics as equal: they are on the same level. It puts everything next to each other, offering a nice overview.

It will be a rigid box to protect the content. The box is open and does not cover the components: everything is visible and easily accessible. It allows the user to take out an exercise card in just a few steps. The front is slightly slanted, showing more of the components: it is more inviting and open.

The box has the same shape as a collection of books. Therefore it would fit rightly on a book shelve: present and available, but not drawing attention.

Structure, format and layout

**Step 1 Inspire**

**Title** - Tinnitus Toolkit

**Main message** - '100 oefeningen die u kunt doen om beter om te leren gaan met uw tinnitus’

**Graphics** - The box brings all the different topics together. Similar to the introduction folder and the CD folder, this part will have a neutral color.

**Step 2 Inform**

**Purpose** - In a few sentences the purpose of the toolbox will be explained.

**Contents** - The content of the toolbox will be put on the outside, using bullet points.

**Production of EMC** - It should be clear the this toolkit is a production of the EMC and that it is part of the information meeting provided there.

**Example text Box**

An example of the text for the Introduction folder can be found in Appendix 4 Example texts. An example of the final design of the Introduction Folder can be found in chapter Final Design.
Figure 17: Format of the Wrapper
8 WRAPPER

Use and Function

There should be some packaging for the toolkit when people receive it: it should look new and unused. It also should make sure that the components will be held on their place during transportation home, as the box is open. When using the toolkit for the first time, it can be thrown away.

Shape: Wrapper

For the packaging a wrapper is chosen (see figure 17). A wrapper just keeps the content together, while most of the content is still visible. This way of packaging is simple and cheap. The box is quite sturdy from itself, so the packaging does not need to be so. The wrapper itself should not contain important information as it will be thrown away almost immediately. As a lot of the casing is visible, the graphic design of the wrapper can be quite calm, and the casing should attract the attention.

Structure, format and layout

Logo EMC - The logo of the EMC will be printed. It will be displayed at the front, the open side.

Title - Tinnitus Toolkit

Description Here it will be written again that this is a production of the EMC

Example Text Wrapper

An example of the text for the Introduction folder can be found in Appendix 4 Example texts. An example of the final design of the Introduction Folder can be found in chapter Final Design.
12.3 Detailing of the toolkit

**EMBODIMENT DESIGN**

**Materialization**

*Dimensions*

The exercise cards will be 220 mm by 140 mm. This size is big enough to contain some text for the exercise, while it still feels like a card and not a letter or poster: it should still be manageable. The content of the exercises will have to be adjusted to the space on the card.

The dimensions of the other components are based on these measurements:
- **Tips & Pitfalls** - 4 Exercise cards stuck together.
- **In-depth Information** - When folded, the same width as the exercise cards, but lower in height.
- **Topic box** - Contain 10 Exercise cards, 1 folded Tips & Pitfalls folder, 1 folded In-depth Information folder and allow for easy handling of those components: not too tight.
- **CD Folder** - The same size as the Topic box.
- **Introduction Folder** - The same size as the Topic box.
- **Box** - Contain 10 Topic boxes, 1 cd folder, 1 Introduction folder.
- **Wrapper** - Fit around the Box.

In Appendix 5 Materialization, the dimensions of all components can be found.

**Note** These dimensions are an estimation. Many dimensions depend on each other and some of them are difficult to predict. For example the distance of the folding lines for the wrapper. The exact dimensions will have to be determined during final production, in consultation with the printer.

**Materials**

All components will be printed. I want all components to look and feel finished and well cared for. The materials need to be sturdy to make the design feel solid and reliable. It should not look like throw-away packaging. Also, it enables and communicates frequent use if it looks robust. It should not look fancy or delicate as it is meant to be used, not looked at.

**Silk paper** All components, will be made from silk paper as recommended by the reproduction department of the EMC. This is a strong and sturdy material that does not require finishing. By using one material for all components, the look and colors will be the same, thus unifying the design.

**Weights** The components consist of different weights of this material, due to their use, form and functions. The weights can be found in Appendix 5 Materialization.

- The Exercise cards, Topic box, Tips & Pitfalls, CD folder and Introduction folder will be made from the heaviest materials that they can be to produce their shape with conventional machines. Otherwise the costs would become much higher, which I think is not necessary.
- Folds in the design ask for a thinner material. Therefore the Exercise cards and the Tips & Pitfalls folder will not be of the same thickness as I wanted.
- Furthermore, the components will be of the same material weight as much as possible, because this could be cheaper during production. Possibly different components can then be printed on one sheet of material.
- The box will be made from grey cardboard covered with a layer of printed silk paper. It will be mat laminated protect the box and make it look nicely finished.
Production

In the Appendix 6 Quotation a quotation for the design is included. This quotation shows the different production steps per component. Assembly is included in it as well.

Finances

Batch size: 400

An estimation was made by the client for the batch size. Probably* there will be around 10 participants per information meeting each week. That makes around 400 a year. The design will have to be available to all participants. With a batch size of 400 it is possible to adjust the content once a year if desired.

Costs: 65 euro

In Appendix 6 Quotation a quotation of the design can be found. This quotation has been made by the reproduction department of the EMC. The production price of one Toolkit is around € 65,-. This includes all printed matter and assembly.

I did not look into the costs for the production of the sound files. The EMC does have an internal audio-visual department that is able to record this and burn the cd’s.

*This is an estimation. During this project, some modifications have been made to the information meeting. It is now a shorter meeting that is being held every week. Due to these changes, it is difficult to tell how many people will participate.
The graphic design of the toolkit should be refreshing, lively and attractive, though it should remain something serious and calm. It should feel light. It should not feel strict.

**Colors** - All components from one topic have the same color. These colors should be bright, lively and warm. They should be easily distinguishable from each other. Yet, it should not become childish or chaotic. I used one basic color (greenish-grey: see figure 18) next to a lot of white to bring calmness and unity to all components.

**Pattern** - I chose to use an abstract pattern as a basis for the design (see figure 19). Using something figurative, for example for each topic, makes it more personal whether somebody likes it or not. As the design is aimed at a very wide target group, it should try to appeal to everybody and therefore not be very outstanding.

**Graphic elements** - It should look simple and recognizable and free. For the graphical elements (icons, drawings, pattern), I used irregular shapes to make it more playful (see figures 20, 21 and 22). I used only one color per topic to keep it calm. On the spine of the topic boxes, two tones of the same color are used: this makes the design look warmer, while not adding more different colors to it (see figure 30).
12.4 Final Design

This paragraph shows the final designs of the components. For the components specific to a topic, the topic of defusion is used.

Figure 23: The Exercise Card
Wat gaat dit mij opleveren?

Wat kunt u dit niet brengen, wat heeft dit effect (op de lange termijn), wat doet dit met u? Niemand kan u vertellen dat u zelf moet ondervinden! En geef het ook de tijd om ermee te oefenen. Soms heeft het pas op een later moment effect.

Met welke gedachten fuseert u? Als u hier niet mee aan de slag gaat, kunt u nadenken over wat u heeft doen ... welke gedachten raakte u verstrikt? Met welke gevoelens worstelde u of welke dingen deed u die u erbij in de weg stonden?

Vaak merken mensen bij het afstand nemen van hun gedachten, dat de pijnlijke gedachte verdwijnt, dat ze zich beter voelen, of beide. Dit is alleen niet het doel van de oefeningen! Het doel is om ruimte te creëren, zodat u kunt doen met een gedachte wat u wilt. Als een Afstand leren nemen van je denken, je gedachten voorbij laten gaan, pijnlijke gedachte verdwijnt of u ziet beter voelt is dat een bonus. Het zal niet altijd gebeuren, dus dat kunt u ... omnihilique re, cum dolum fugiate sendiaes at. Pid quidus eicientem enitiore cus arum nia que voloreperrum aceped.

Binnen het onderwerp Kijken naar je denken zijn we er niet zozeer in geïnteresseerd of uw gedachten waar zijn of niet, maar of ze helpen. Als u deze gedachte losjes vasthoudt, helpt hij u dan om het leven te leiden dat u wilt? Zal hij u helpen uw doelen te bereiken, uw relaties te verbeteren of de persoon te worden die u wilt zijn? Nam idel et quodiam conetur sunt aut faceaquam faciistium ipis volore.

Dit is helemaal niet erg, en juist heel normaal! Het is niet mogelijk, en ook niet wenselijk om continu je gedachten te observeren. Het is bruikbaar om de ondersteunende tips & Valkuilen - Kijken naar je denken - Kijken naar je denken - Kijken naar je denken te door te nemen: deze ondersteunen u bij het oefenen. Komt u een situatie tegen die u bij uzelf herkent, dan is de toelichting waarschijnlijk bruikbaar voor u.
Figure 25: The In-depth Information Folder, outside
**DEFUSIE EN ACCEPTATIE EN COMMITMENT THERAPIE**

Dit onderwerp heet eigenlijk Defusie, en is een onderdeel van Acceptance and Commitment Therapy, oftewel ACT. ACT is ontwikkeld als een nieuw soort cognitieve gedragstherapie. ACT kan je onder meer helpen om acuutere en toegewijde Cruith therapie te vinden. Dit kan helpen om een meer accepterende en rustige houding te vinden bij ongewenste ervaringen in het leven en meer gecentreerd en betrokken actie te ondernemen om je leven prettiger te maken.

### bij alle oefeningkaarten

Wilt u meer inzichtelijkheid en vindt u het fijn om het leesbaar aan de slag te gaan met ACT? Download een app gebaseerd op ACT.

Wilt u meer informatie en uitleg over Defusie en ACT dan heeft u van teken??

Ga dan op zoek naar een boek over ACT.

### bij ‘Bladeren op de rivier’

**MINDFULNESS**

Mindfulness is een pellucidus sodi, te pore ira qualqui scortique canon en suas consorga et additio emolipta adietat guarere can ile. Menta explorar is qua estuim aderite morditae my nequeoq, present avoet inotigacte deos oletnam, sedvoc sco sam fugia ut officir. Sequant, vixus gnaam, interim quic aut vixus delam ramistro oitam siltex quidactus eogia solitio eolium solitio dolarion sonumpos, corum, car te molestias lam sad al que endite?

Wilt u graag zelfstandig blijven oefenen (en heeft u een smartphone of computer)?

Download een app gebaseerd op mindfulness.

Wilt u graag zelfstandig blijven oefenen (zonder computer of smartphone)?

Ga op zoek naar een zelfstandige cursus.

### bij ‘Wijderen op de rivier’

**Mindfulness**

Mindfulness is een pellucidus sodi, te pore ira qualqui scortique canon en suas consorga et additio emolipta adietat guarere can ile. Menta explorar is qua estuim aderite morditae my nequeoq, present avoet inotigacte deos oletnam, sedvoc sco sam fugia ut officir. Sequant, vixus gnaam, interim quic aut vixus delam ramistro oitam siltex quidactus eogia solitio eolium solitio dolarion sonumpos, corum, car te molestias lam sad al que endite?

Wilt u graag zelfstandig blijven oefenen (en heeft u een smartphone of computer)?

Download een app gebaseerd op mindfulness.

Wilt u graag zelfstandig blijven oefenen (zonder computer of smartphone)?

Ga op zoek naar een zelfstandige cursus.

### bij ‘Wijderen op de rivier’

**Mindfulness**

Wilt u graag meer begeleiding en persoonlijk advies?

Vind een goede psycholoog die bekend is met ACT.

### bij ‘Bladeren op de rivier’

**DEFUSIE EN ACCEPTATIE EN COMMITMENT THERAPIE**

Wilt u graag meer informatie en uitleg over Defusie en ACT (en houdt u van lezen)?

Ga dan op zoek naar een boek over ACT.

### bij ‘Wijderen op de rivier’

**Mindfulness**

Wilt u graag begeleid oefenen met anderen?

Vind een goede psycholoog die bekend is met ACT.

---

Figure 26: The In-depth Information Folder, inside
De pijnlijke gedachte verdwijnt, wat fijn!
Dit ga ik vaker zo doen!

Vaak merken mensen bij het afstand nemen van hun gedachten, dat de pijnlijke gedachte verdwijnt, dat ze zich beter voelen, of beide. Dit is alleen niet het doel van de oefeningen! Het doel is om ruimte te creëren, zodat u kunt doen met een gedachte wat u wilt. Als een pijnlijke gedachte verdwijnt of u zicht beter voelt is dat een bonus: het zal alleen niet altijd gebeuren, dus dat kunt u niet altijd verwachten. To to invent odignih ilique conse nonsequid quisim quae nonsed etur repero omnimus eum volupturia nem. Beatiam nulparum quibus exceptatus eiciatas dem quiaecacte omnihilique re, cum dolum fugiate sendiaes at. Pid quidus eiciemtem entiorem cures arum nia que voloreperrum aceped.

Tip Het kan handig voor u zijn om het onderwerp 'De illusie van controle' [nog] eens te bekijken.

ige dingen in het leven en meer ondernemen om je leven prettiger

formatie en uitleg over Defusie en u van lezen)?

oek naar een boek over ACT.

Wilt u graag meer begeleiding en persoonlijk advies?

Vind een goede psycholoog die bekend is met ACT.

Tips voor het zoeken:
Solutio. Epraevionsequia nus, temporr etvitae nosam aut quamusae praepro repuda dolores temoluptio doloribuscit officii ignendi ipsapid quibus am rem aridem re laborporates et moluptis mo ipsaece storessunt. Ulla sandae. Oddle ridror senime veliquo disque.

Trefwoorden: Endio, corenima, sumet, voluptur, acumqu, comnim.

Figure 27: Close up of TheTips & Pitfalls Folder and the In-depth Information Folder
Kijken naar je denken

Gedachten hebben we allemaal, maar wat doen die eigenlijk met ons? Welke invloed hebben ze? En is dat wel zo handig? Hoe gaat u eigenlijk om met uw gedachten?

Als u bereid bent om de oefeningen te doen, wie weet, ontdekt u dan dat veel van uw angsten en zorgen worden veroorzaakt door uw verstand, en niet door de werkelijkheid.
Hoe gaat u om met uw gedachten?

Dit onderwerp gaat over *lorem ipsum dolor sit amet, consectetur adipiscing elit*. *Vivamus sapien risus, venenatis sit amet turpis at, bibendum um condimentum augue. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Morbi luctus mattis lacus sit amet dapibus. Donec commodo pretium lorem, ut maximus ante aliquam vitae.*

Dit is relevant voor *tinnitus omdat suspendisse lobortis at lacus a iaculis. Proin egestas nisi at ex tristique, a scelerisque nisi fringilla. Sed vitae finibus dolor, sit amet consectetur odio. Nulla facilisi. Integer pellentesque, tellus eget pellentesque pulvinar, est mauris viverra sem, varius rutrum leo libero lacinia massa.*
Hier en nu zijn
Aandacht trainen
Omsnaren het geluid
Ontgravden
Ruimte maken
Eenmaal luisteren
Rijken naar je denken
De illusie van controle
Zien wat goed is
Gedachten veranderen

Figure 30: The Topic box colors
Ontspannen aandacht trainen
ernaar luisteren ruimte maken
kijken naar je Denken
hier en nu zijn
Omgaan met geluid
het podium
Bladeren op de rivier
als een vis in het water

Ontspanningsoefening
ademhalingsoefening
meditatieoefening
slaapoefening

RUIMTE MAKEN
Beweeg aan de kant en pak op
Breng naar beneden
Een moment
MEER EN NU ZIJN
Alleen naar boven
Langer naar beneden
Lange oefening

ERNAAR LUITEREN
Luisteren naar je hand op je hand
Luisteren naar je hand

MAANDACHT TRAINEN
Aandacht verplaatsen
Focus technieken

Lange oefening geluid
Lange oefening met ruis

KUNNEN NAAR JE DENKEN
Wat gedachten
Bladeren op de rivier
Drie-deuzes

KORTJE EN NU ZIJN
(1) Kortje meditatie
(2) Lange meditatie
(3) Lange oefening

ERSGAAN MET GELUID
(1) Korte oefening geluid
(2) Korte oefening met ruis
(3) Lange oefening geluid
(4) Lange oefening met ruis

Een CD folder en CD

Geluidsbestanden
TINNITUS TOOLKIT

Figure 32: The CD Folder and CD
Ontdek en Onderzoek

Welke Onderwerp zit er binnen?

Om te beginnen, kunt u een kaart kiezen die u aanspreekt, of pak een nieuwe kaart uit het boekje. Het is aan u om te ontdekken wat u prettig vindt en bij u past.

Wanneer zal ik oefenen?

Elke oefening is goed: het maakt niet uit waar u mee aan de slag gaat. Het is aan u om te ontdekken wat u prettig vindt en bij u past. De ervaring leert dat deze vaak effectief zijn.

Welke kaart zal ik doen?

Wanneer u een onderwerp leest dat u aanspreekt, kunt u beginnen om uw oefening uit te voeren. Het is aan u om te ontdekken welk onderwerp nuttig voor u kan zijn: dit is een goede start.

Welke manier kan ik hier mee aan de slag?

Er zitten veel verschillende oefeningen in deze toolkit: hele korte, langere: tussen de 10 en 30 minuten, en nog langer: tussen de 30 en 60 minuten. Het verschilt ook per oefening hoe regelmatig u de oefening moet doen. Bewaar de informatie bijeenkomst als u graag wilt bekijken als u graag wilt beperken.

Aan de slag

Wat is het doel van deze oefening?

Hieronder geven wij u een aantal tips voor het oefenen met deze toolkit. Neem deze regelmatig door!

Tips

1. Probeer verschillende oefeningen uit. Wanneer u kiest voor dingen die u tijd kost, is de kans op verandering van uw situatie nauwelijks tijd kosten.
2. Doe regelmatig dingen als ik. Dat kan een eenvoudige oefening zijn, of iets meer complex. Het is belangrijk dat u de vaardigheid oefent die u nodig heeft voor het leven met tinnitus. Zelfs de eenvoudigste oefening kan een kans zijn dat die na een paar keer toch erg prettig blijkt. Geef niet te snel op. Het kan een tijdje duren voor u merkt. Het is een proces dat tijd kost. Wees u hiervan bewust en verwacht geen wonderen.
4. Kies juist ook oefeningen die u misschien niet aanspreken. De ervaring leert dat de vaardigheid die u nodig heeft voor het leven met tinnitus, nauwelijks tijd kosten.
5. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest.
6. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest.
7. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest.
8. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest.
9. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest.
10. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest. Het is belangrijk dat u een eenvoudige oefening kiest.

Er zitten veel verschillende oefeningen in deze toolkit: hele korte, langere: tussen de 10 en 30 minuten, en nog langer: tussen de 30 en 60 minuten. Het verschilt ook per oefening hoe regelmatig u de oefening moet doen. Bewaar de informatie bijeenkomst als u graag wilt bekijken als u graag wilt beperken.
Deze toolkit bevat:

- 100 oefenkaarten verdeeld over 10 onderwerpen
- tips en valkuilen om zelfstandig aan de slag te gaan
- meer informatie voor als u meer wilt lezen

Een uitgave van het Erasmus MC. Het is een onderdeel van de informatiecursus ‘leren leven met tinnitus’.
Deze toolkit is een uitgave van het Erasmus MC. Het is een onderdeel van de informatiecursus ‘leren leven met tinnitus’. TINNITUS TOOLKIT

Figure 35: The Wrapper
12.5 Use of the toolkit
The following pages show a concise scenario of the envisioned use of the toolkit.

**Part I**
**Prior to the Information Meeting**

**Consult with ENT-Doctor**

---

**Oh jee, het lijkt wel of het steeds erger wordt...**

**Ik heb continu een piep in mijn oren. Wat is dat? Ik wil dat het weggaat!**

**U heeft tinnitus mevrouw. Tinnitus is...**

**We kunnen medisch gezi...**

**Wat we wel kunnen doen, is u helpen met het geluid om te leren gaan, zodat u minder last ervaart.**

**Hierdoor hebben wij een informatiev...**

**Graag!**

---

**Zeg Jan, ik kan niet slapen. Ik hoor weer steeds die piep.**
Ik vraag me af wat ze vandaag gaan vertellen…
welkom allemaal bij de informatiebijeenkomst over tinnitus. Vanochtend gaan we het hebben over...
...en daarom is het bijvoorbeeld belangrijk om genoeg ontspanning op te zoeken.
maar hoe moet ik nou ontspannen met zon piep? dat kan toch niet? ik geniet niet meer van een boekje lezen zoals vroeger...
Dat kan inderdaad lastig zijn, mevrouw, maar…
tegen het einde van de bijeenkomst we kunnen u echter wel helpen in dit proces. daarvoor hebben we deze toolkit ontwikkeld.
we kunnen u echter wel helpen in dit proces. daarvoor hebben we deze toolkit ontwikkeld.
uit het hiermee actief onderzoeken en ontdekken wat voor u werkt en wat u prettig vindt in het omgaan met tinnitus.

Informatiebijeenkomst

Explanatie over tinnitus

Personal Questions

Introductie van de toolkit
Ik raad u aan eerst met onderwerp 'O' aan de slag te gaan. Onderwerpen 'O' en 'A' kunnen u denk ik daarna ook goed helpen. Ik heb het voor u opgeschreven, ik begrijp een stuk beter wat ze bedoelen met 'omgaan met tinnitus'... maar ik vraag me af wat dit gaat veranderen...

Thuis, dit onderwerp was me aangeraden tijdens de cursus... dus laat ik daar maar mee beginnen.

Nou, hopelijk wordt het hierdoor minder.

Eens kijken wat er allemaal in zit...

Dit onderwerp was me aangeraden tijdens de cursus...

...dus laat ik daar maar mee beginnen.
Deze mag blijven zitten, die heb ik nog niet nodig.

Met welke zal ik beginnen?

Hm, dit lijkt me niks; klinkt veel te zweverig!

Deze misschien? Of deze?

Dit lijkt een eenvoudige opdracht. Die ga ik doen.

Ok, stap 1: schrijf...

Dat was interessant.

En nu? Wat kan ik hier mee doen? En heb ik het wel goed gedaan?

Ah, achterop staat meer uitleg.

Merkte ik dat...? Dat weet ik niet eigenlijk, ik zal hem binnenkort nog eens oefenen.
Deze oefening wil ik de komende tijd vaker proberen. Ik houd hem bij me.

Genoeg geoefend voor vandaag.

Eenmaal kijken of deze oefening wat is...

Bah, ik stop met deze oefening, die is vast niet voor mij bedoeld; veel te saai.

Dinsdag

Eens kijken of deze oefening wat is...

Woensdag

Bah, ik stop met deze oefening, die is vast niet voor mij bedoeld; veel te saai.

Vrijdag

Ik doe wel weer die ene; die vond ik fijn.

Zaterdag

Ik ben nu toch benieuwd wat dit is...

Oke, misschien moet ik toch die saaie oefening nog eens proberen...

He, dit komt me bekend voor! Eens zien...

Use of tips & pitfalls folder
Oh dit is saai, wat duurt die cd lang...

Ik hoop dat dit wel effect gaat hebben...

Eigenlijk wel lekker rustig zo...

Ik voel me best ontspannen zo...

Na een tijdje oefenen

Dit is toch wel een prettige oefening. Ik merk dat er iets veranderd is.

Ik vind dat alleen oefenen wel lastig:
Ik zou wel wat meer begeleiding willen.

Ah, er zijn zelfs cursussen hiervan. Dat lijkt me fijn:
Samen met anderen oefenen.

Ik ga me meteen inschrijven voor zo'n cursus.
CHAPTER 13

EVALUATION AND RECOMMENDATIONS

This chapter describes the evaluation of the design. Expert interviews were carried out. Recommendations on the development and implementation of the design are given as well.

13.1 Evaluation: Expert interviews

Different experts in the field of psychological treatment of tinnitus were interviewed about the design, in order to evaluate it. In total 4 people with different backgrounds were interviewed. Two of them are familiar with the context of the information meeting at the EMc. The other two are not.

A choice was made to interview experts. The interviewed experts have experience with working with people with tinnitus. They know the kind of issues people encounter and what can help them overcome those. They understand the treatment so they can react on the designed concept and form, without the content being included.

MAIN QUESTIONS

The interviews were carried out to find out what experts think of the concept in general and whether they have ideas for improvement.

SET-UP

It were semi-structured interviews of around one hour each. I started with a short introduction of the project, the context and the design I have developed. I gave the experts the prototype to explore and a scenario that illustrates the envisioned use of the toolkit. Then different aspects of the project and the design were discussed, e.g. experiential, personal, exploring, independent use.

DISCUSSION AND CONCLUSIONS

Overall, the experts think that the toolkit can be an interesting and valuable addition to the treatment of tinnitus, though they have different opinions on how to provide it.

Some positive points the experts mentioned
- the design is consistent with the EMC information meeting
- the design offers a good overview
- the design offers a large variety which is in line with the many different needs
- it makes sense to offer concrete exercises as you want people to realize behavior change
- the design looks inviting and attractive, (maybe even a bit too attractive)
- it could be interesting to investigate incorporation of other therapies, such as psycho-motor and art therapy

There were also some discussion points and suggestions. If possible and relevant I have included their suggestions in the design already.

Keep an open end

Initially I included a letter to be sent to a participant around eight weeks after participation of the course, asking how it is going and whether any help is wanted. The idea behind this is that I found that people feel a bit fobbed off and left alone after the information meeting. In this way, you would show that you care. I have discussed this with the experts and I have decided that is it not a good suggestion for several reasons.
First, the EMC has to be sure it can offer what it is saying. Something like this creates more work, even more as more people will contact the EMC again. Second, you are basically sending people a reminder that they have tinnitus. Third, you allow people to adopt a more passive attitude. People might ask for an appointment just to be sure, even when they have not practiced with the toolkit. Fourth, if people want more help, they know how to contact the EMC again as they have been there before.
Topic names

A suggestion was given to include ‘tinnitus’ into the names of the topics. In this way, it would become clear what the relevance of the different topics is to tinnitus and that it is not a ‘general’ toolkit. I agree that it is very important for people to understand this relation, which is not straightforward. However, with this design, it would mean that people will have ten ‘books’ on their book shelf reading tinnitus. I think this is too much and might scare people off a little. Therefore I would leave the names of the topics more general.

Include keywords in the In-depth Information folder, instead of specific Apps and titles

Initially I wanted to include specific book titles, course titles, apps etc. as suggestions in the In-depth Information folder. This would provide people of useful and specific options, allowing them to focus on acting, rather than searching. However, this implies a lot of work for the psychologists. They will then have to look into and become familiar with these options, as they have to know what they are suggesting to people. In my opinion, the extra work this would cost is not the most important and contributing to the development of the toolkit. Second, it can be difficult to choose which one is the best for everyone (for example: which mindfulness app should you include?). Again this is very personal. Third, this content, in particular Apps, develop very quickly. The folder is printed and can be updated only once a year. This is not convenient. Therefore I decided to keep the In-depth Information folder on a little more abstract level and support people in how and what to look for, rather than being very specific.

Offer for free or ask people to pay?

It can be interesting to ask the user to pay a symbolic amount for the toolkit, instead of giving it away (covered by the insurance company). Asking for payment, is asking to offer something; people might then attribute more value to the toolkit. Asking them to pay will make them think and consider whether it is worth it and whether they think they will use it or not: it is likely that people will be more committed. It asks people to act and otherwise it is very easy to take it ‘just to be sure’.

It sounds reasonable to me to ask for payment.

Independent use of the toolkit

One of the experts thinks that people with bothersome tinnitus are not able to work on improving their situation on their own. The expert argued that if they did, they would not require any help. If not, they need support and coaching from a person. She thinks that the hospital takes the cheapest and easiest way by offering a toolkit. The expert thinks that the toolkit can be good course material to support the coaching.

I think this is a valuable point. Though, based on the interviews with other experts and my own research I think there are other ways of supporting people in the process of learning to live with tinnitus that can be helpful for somebody: not everyone needs or likes group coaching sessions.

Furthermore I think the toolkit offers a realistic addition that is within the resources of the EMC. Her solution, group coaching sessions, is idealistic. With the toolkit the EMC can offer more guidance, and therefore enlarge their capacity: they aim to offer the best they can to the largest group of people.

The other experts think that a part of the people suffering from tinnitus can benefit from the toolkit. For example those who understand the principles behind tinnitus but can use a little more help to realize and maintain behavior changes. Though this has to be seen from practice.

Different options were discussed and suggestions were given during the interviews on how to offer the toolkit. In case it appears that people need more guidance or coaching, there are many opportunities to set up a service around the toolkit. For example, the social worker at the EMC currently does not have a specific role in the tinnitus team. She might offer more support to people in practicing with the toolkit. Another suggestion given was to provide the toolkit in combination with two group meetings. People really appreciate meeting others and exchanging experiences. Also, a second meeting gives the participants time to let all the information sink in and start experimenting with the toolkit. If new questions pop up, they will have an opportunity to get answers.
13.2 Recommendations

In this paragraph I will give some recommendations for the development of the toolkit and for its implementation in the information meeting of the EMC. Finally I give some ideas for the future of the toolkit.

RECOMMENDATIONS FOR DEVELOPING THE TOOLKIT

Develop content

The toolkit as it is now is a format. The first step to be taken is to develop the content. A choice of exercises suitable for the target group and that fit in this format, will have to be made. The texts for the different components have to be written. For proof of concept, it might be enough to start with the development of fewer exercise cards per topic.

There are many advices included in the design: in the Introduction folder, the Tips & Pitfalls folder and on the back of the exercise card. To start with, these can be taken from books and manuals that describe the practice of psychotherapies. Perhaps in the near future it is possible to develop advices for tinnitus specifically.

Explanation cards - Although the core aim of the toolkit is to have people act, and not to understand, it might be that some more explanation is needed than there is room for in the design. For example, in the topic Defusion, I think an explanation of ‘the thinking self and the observing self’ will greatly support people in practicing the exercises. Therefore I would suggest that, if an explanation that supports the exercises is really essential, this can be included in the form of an ‘explanation card.’ This will have the same dimensions as an exercise card, but without instruction. In this way it still belongs to the practicing activity.

Order of exercises - In some cases I think it might be best for people to do a certain exercise before another. In that case this can be added as a suggestion on the card. For example below the title: ‘We advise you to first do exercise X, before doing this one.’ In this way people are still free to choose what to do.

Suggestions for writing the texts

Use examples - I would try to use many examples that people can relate to: it will illustrate the theory and make it recognizable and people might feel more addressed. For example, in an exercise concerning thoughts, the example: ’I am a victim of my tinnitus’ is more relevant than ’I am a loser.’ I would adjust the examples to what people experience in practice. Also the tips and pitfalls should be taken from (the tinnitus) practice as much as possible.

Skills - It could be interesting to refer to the topics as ‘skills’, even though not all of them are. It communicates that practice is important and that focus is on the long term.

Tone and use of language - I think it is important to use very simple and accessible language. No long sentences or complicated words. It should be accessible and understandable to everyone. Technical terms should only be used in the In-depth Information folder to allow people to search. For example: I would not use ‘mindfulness’ on the exercise cards. I would keep the tone friendly and understanding.

Be concrete and clear - The exercises should be very concrete and clear, otherwise it might confuse people. For example, when advising people on the use of a certain exercise, define what is meant by ‘regularly.’

Record audio files

The audio files for the exercises will have to be recorded. I would record all files with the same person, someone who has a neutral and pleasant voice.

Graphic design

I would hire a graphic designer to make the graphic design of the components. Also, it should be checked with the EMC what requirements there are to printed materials: use of logo and corporate identity. I did not look into this. I deliberately did not use the corporate identity of the EMC, as in my opinion the association with a hospital should be kept to a minimum. Therefore I would try to see what the minimum amount of corporate identity elements is that the EMC agrees with.
Proof of concept

The toolkit should be tested and evaluated. This was not possible for me to do during this project, as there is no content for the toolkit yet. Although there are many different aspects to evaluate, the main question to answer is whether the toolkit, in combination with the information course, helps people to independently learn to live with their tinnitus. This should be evaluated on the long run.

Concerning the design (form and format) there are some aspects that could be evaluated too. For example, are people able to navigate through the toolkit and use the different components as intended? Or is it not clear when to use which one and why?

I think the toolkit can be used in many different ways. It is interesting to see what people do with it. If these ways of use are not helpful, the design should be adjusted. For example, if it turns out that most people try to do every exercise included, or if nobody uses the Tips & Pitfalls folder.

Materialization

The materialization of the design might have to be reconsidered. The toolkit might be too expensive, though it depends of the available budget and whether participants will be asked to pay for it.

RECOMMENDATIONS FOR IMPLEMENTATION OF THE TOOLKIT IN THE INFORMATION MEETING

The toolkit will be introduced during the information meeting. This paragraph explains my suggestions on how to do so.

Placement of the toolkit

When people enter the information meeting room now, the course folders are placed on the table in the middle. I would not do this with the toolkits because I think it will be very distracting and they will only be used at the end of the information meeting. Instead, I would place them on a table on the side, preferably next to the exit, ready for people to take home.

Explanation about tinnitus

At the information meeting, the course instructor[s] give a presentation. In this presentation the different topics from the design are explained. I would suggest to use the same names of the topics in the design explicitly. In that way people will recognize the topics of the toolkit and understand their relevance with tinnitus better. It also helps them to know what to expect from the toolkit, which lowers the threshold to use it.

Introduction of the toolkit

Explanation - I would introduce the toolkit at the end of the information meeting. I think it is very important to explain its purpose clearly.

In this introduction I think it is important to mention the following:
- this process is something, that you have to do yourself, we cannot do it for you;
- this toolkit can help you explore and discover your own personal way of dealing with tinnitus;
- therefore, it is now up to you to get going with it and try it out for a while;
- you are not meant to do everything, just see if there are some things that suit you;
- you can always contact us again for an individual appointment;
- we invite you to try out new things [with this toolkit], even if it is difficult: doing what you have always done, does not give the best chance of improvement;
- you could practice with different topics simultaneously.

I would keep these points limited and concise, as the information meeting is already comprehensive. I would support the message by making a PowerPoint slide with these points. These main points should be included in the Introduction folder as well.

Demonstration - I would give a short demonstration of the content and components of the toolkit. This lowers the threshold for people to use it, as it helps them to form a picture of using it.
Personal advice

I think it is very important to give people personal advice on where to start with the toolkit (see also use scenario). I think this will reassure people as they know exactly what they can do when they get home (see design goal). It also can make the design seem less complex. I can imagine the toolbox being quite overwhelming: where should I start? Giving an advice on topics also stresses that the toolkit is not meant to be executed entirely: find you own selection. It also stresses that you can would with multiple topic simultaneously. If people would only work on relaxation for example, the chance remains that they try to flight (though this can be incorporated in the Tips & Pitfalls folder and in the Introduction folder as an advice).

As the information meeting is now being held weekly, it is expected that the groups will become smaller. This allows the course instructor[s] to give people personal advice.

Taking the toolkit home

I would invite all participants to take a toolkit home, though it is up to them to choose if they want to.
I would not hand everybody a toolkit as a standard procedure: people should make a conscious decision of taking one, or not. This fits with the design vision. Giving a toolkit when they are not interested is a waste of materials. Also, there are probably people for whom the information meeting only is sufficient.
As explained in the previous paragraph, it could be interesting to ask people to pay for it. I would keep it a symbolic amount: the price should never be a reason not to take a toolkit.

If the toolkit works well, the sound files can even be put online for people to download. This saves material, but requires to set up a [secured] website. Therefore I would only consider this in a later stage.

Include course information in the toolkit

I think it can be a good addition to the toolkit to include the information of the course. This could be done in a separate booklet that fits in the box next to the other components. This booklet would then replace the current prints of PowerPoint slides that are handed out.
I suggest to make this a standalone booklet: if you have missed something during the information course, you can read it afterwards. Note that it should be kept very concise, otherwise people might want to read too much about tinnitus.

Refer to this booklet in the introduction of each topic

If such a booklet is added to the toolkit, there is an opportunity to refer to this information in the toolkit. These references can be put on the inside of each topic box, below the introduction. There is very little space now to explain the relevance to tinnitus of the topic, while this is important for people to understand. The information booklet could offer some more space if required.

Investigate options to offer more guidance or coaching in using the toolkit

Most likely the toolkit will not help everybody. I can imagine that people might need more support in working with the toolkit. Therefore I think it is interesting to investigate the ways in which a service can be put up around the toolkit.
What service to offer depends very much on which problems people encounter with the toolkit. Different media can be considered: some sort of helpdesk, online or via an App, a consultation over the phone (for example by the social worker), an extra group meeting or an individual consult. This can be as extensive as needed.

RECOMMENDATIONS FOR FUTURE DEVELOPMENT OF THE TOOLKIT

Include memory stick

Upon request the sound files are now put on a CD. I think that soon not everybody will have a cd-player anymore. Therefore I would put the sound files on a memory stick, for example a USB Credit Card model. This can be included in the toolkit in the same way as the CD. It is also possible to offer both and have people choose one.
13.3 Personal Evaluation

In general, I think the toolkit is a logical first small step in addition to the information meeting. Even though it is quite some work for the psychologists to develop the content, I think it is a realistic and feasible solution. I am very curious about how people will use the toolkit and what it might bring them. The biggest doubt I have with this concept, is whether people will be able to work with it and improve their situation independently. The toolkit is meant for people to explore things and find what suits them. But how do you know that? When something is difficult, should you push through or does it mean that that exercise does not suit you? These can be difficult situations in which the toolkit cannot help you. However, I think the toolkit can form a good basis, a first step. I see many opportunities for developing a service around it, that support people in using the toolkit. Help planning, evaluating, sticking to your plan etc. are all services that support it. At this point, it is impossible to tell how effective the toolkit is and what additional services around the toolkit might be required: the current design should be tested and evaluated first.

13.4 Personal Reflection

I find the topic of this project very interesting: not only tinnitus, but also the psychology around it. It was all new to me, which made it difficult to comprehend and grasp and which made it very fascinating at the same time. I really appreciate the opportunity to be able to take a look in a completely different world than what I am familiar with. I want to know how things work, and I feel like I need that understanding to be able to apply it in a different form. Though in this project I kind of got lost in the content of the concept, and at certain moments I found it difficult to distinguish form and treatment from each other. Looking back I wanted the design to contain and offer too much and I was putting the content first. The advice and realization to work starting from the form and to keep it small, is what really helped me in the process, even though it took a while. In the end, I think that this extensive researching and ideation gave me a lot of insights in the process of learning to live with tinnitus and, most importantly, how to support in that. Regarding the design, I am really curious as to what it can bring to people and I hope it can help them learn to live in a better way with their tinnitus. And I hope I did not saddle Arno with too much extra work!
13.5 References


PART V APPENDICES
Interviews

EMC
To understand the context of this project and get information on the psychological treatment of tinnitus, I participated in the EMC course twice. I had various conversations with the course instructors.

To understand what the whole treatment that the EMC offers contains, I interviewed members of the tinnitus team: two Ent-doctors and two audiologists.

I interviewed three people that participated in the course some time ago, to get an understanding of what learning to live with tinnitus means and to evaluate how the treatment of the EMC supports in that process.

UMC
To get a broader view on practical applications of psychological treatment I studied the course material from the tinnitus course given at the UMC Utrecht. I did not participate in this course.

I interviewed three people that participated, to get an understanding of what learning to live with tinnitus means and to evaluate how the treatment of the EMC supports in that process.

Other
Furthermore I had some interviews with people with tinnitus that did not receive a (specialized) treatment, to get a broader view on how this process could go and what needs people have.

Treatment of tinnitus

TREATMENT OF TINNITUS: AUDIOLOGICAL

Tinnitus is often caused by hearing loss. If this is the case it should be examined whether a hearing aid can improve the situation, for multiple reasons. This is the domain of an audiologist.

Next to hearing better, which is an improvement in itself, a hearing aid might bring (some) relief from tinnitus. This can be explained in different ways. Through a hearing aid a person(s brain) receives a more complete amount of stimuli as input and therefore less effort is required for listening and therefore one can experience less tinnitus.

Next, as there is a more complete sound to be heard, the tinnitus sound might be masked by these sounds and become less noticeable in relation to other sounds. Lastly it might reassure the person, which causes their brain to behave more calmly (A. Lieftink, personal communication).

PSYCHOPHYSICAL MATCHING PROCEDURE

Psychoacoustic characteristics (subjective tone, pitch, loudness) of the tinnitus can be measured using a psychophysical matching procedure. Here the person matches a sound from an external source to their tinnitus sound. In this way the tone, type of sound and the volume can be measured.

INCREASE PSYCHOLOGICAL FLEXIBILITY

The objective of Acceptance and Commitment Therapy (ACT) is to live a rich and meaningful life and accept the inevitable pain that is part of it. It aims to increase one’s psychological flexibility, which refers to the human ability to fully contact the present moment, while being open to experiences and act according to your values (Harris, 2010).

BACKGROUND OF ACT

Acceptance and Commitment Therapy is a relatively new therapy developed by Steven C. Hayes, Kelly G. Wilson and Kirk D. Strosahl at the end of the twentieth century (Jansen & Batink, 2014).

Relational Frame Theory

ACT is based on the Relational Frame Theory that states that humans have the ability to create links between things. This ability makes that people associate and connect one thing to another, even though they have not noticed the connection in real life. This phenomenon is called Relational Framing. Relational Framing is a positive quality, but it also has a disadvantage. It can make people believe that their thoughts about an event are reality. This mechanism can lead to psychological complaints.

According to the ACT-model of psychopathology there are two processes crucial in causing psychological complaints: Cognitive Fusion and Experiential avoidance. Cognitive Fusion means that ‘behavior is being regulated more and more by a complicated network of linguistic relations instead of direct experiences’ (Jansen & Batink, 2014). This fusion with thoughts leads to Experiential Avoidance: trying to avoid certain internal experiences (such as thoughts, emotions, feelings, memories), which can eventually lead to psychological complaints (Jansen & Batink, 2014).

THE 6 PILLARS OF ACT

ACT therapy consists of 6 core processes, called the pillars. These are: Contact with the Present moment, Defusion, Acceptance, Self as context, Values, Committed action. Together these create an increased psychological flexibility (Harris, 2010; Jansen & Batink, 2014).

The following paragraphs are taken from the book Acceptatie en commitment therapie in de praktijk. Een heldere en toegankelijke introductie op ACT, by Russ Harris (Harris, 2010).

Creative Hopelessness

‘Creatieve hopeloosheid betekent dat je je volledig openstelt voor de realiteit dat een rijk en vol leven onmogelijk wordt als je te hard probeert te controleren hoe je je voelt.’
Doel: ‘Bewustzijn van de emotionele controleagenda verhogen: ervaren dat die in wezen onwerkbaar is en ontdekken waarom dat zo is.’

(Cognitive) Defusion

‘Fusie betekent dat je verstrikt raakt in je gedachten en je gedrag erdoor laat domineren. Defusie betekent dat je je losmaakt of afstand neemt van deze gedachten, dat je ze laat komen en gaan.’
Doel: ‘De ware aard van gedachten zien – ze zijn niets meer of minder dan woorden en beelden – en erop reageren in termen van werkbaarheid en niet van letterlijkheid (hoe behulpzaam ze zijn en niet hoe waar ze zijn).’

(Experiential) Acceptance

‘Acceptatie betekent dat je je gedachten en gevoelens laat zijn zoals ze zijn, of ze nu aangenaam zijn of pijnlijk zijn. Je stelt je ervoor open en maakt er ruimte voor. Je worstelt er niet meer mee en laat ze uit zichzelf komen en gaan.’
Doel: ‘jezelf toestaan om pijnlijke prive-ervaringen te hebben als dat helpt om in overeenstemming met je waarden te handelen.’
(Contact with the) Present Moment
‘Contact met het huidige moment betekent dat je in het hier en nu bent, volledig bewust van je ervaring, in plaats van op te gaan in je gedachten. Het gaat erom dat je flexibel aandacht besteedt aan de innerlijke psychische wereld en de uiterlijke materiële wereld.’
Doel: ‘het bewustzijn van je ervaring in het huidige moment vergroten, zodat je goed kunt waarnemen wat er gebeurt en belangrijke informatie verkrijgt over de vraag of je je gedrag moet veranderen of niet. Om je helemaal te verbinden met wat je doet, zodat je effectiviteit en voldoening toenemen.’

Self as Context
‘Zelf ALS context is geen gedachte of gevoel, maar een ‘gezichtspunt’ van waaruit we gedachten en gevoelens observeren, een ‘ruimte’ waarin die gedachten en gevoelens kunnen bewegen. We betreden deze ‘psychische ruimte’ door op te merken dat we opmerken, of door ons bewust te worden van ons bewustzijn. Het is een ‘plek’ van waaruit we onze ervaring kunnen observeren zonder erin verstrikt te raken. ‘Puur bewustzijn’ is een goede term omdat het dat preceis is: bewustzijn van ons eigen bewustzijn.’
Doel: ‘je te verbinden met een transcendent zelfbesef dat afgescheiden is van gedachten en gevoelens, en dat een veilig en constant gezichtspunt verschaf waar vanuit je je kunt observeren en accepteren. Om mensen te helpen niet meer voor hun pijn weg te rennen, helpen we ze ervaren dat er ‘binnen een plek is’ waar, hoe groot die pijn ook is, hij hen niet meer kan raken.’

Values
‘waarden zijn verklaringen over wat je met je leven wilt doen, waar je voor wilt staan en hoe je je wilt gedragen. Het zijn principes die je leiden en motiveren.’
Doel: ‘Helder krijgen wat je leven betekenis geeft of een doel geeft, en je waarden gebruiken als leidraad voor je daden.’

Committed Action
‘Verbonden actie betekent dat je de patronen van je doeltreffend handelen steeds groter maakt, geleid door en voortkomend uit waarden. Het betekent ook flexibele actie: je snel aanpassen aan de uitdagingen van de situatie en gedrag zo nodig volhouden of veranderen; doen wat je moet doen om naar je waarden te leven.’
Doel: ‘waarden vertalen in duurzame, zich ontwikkelende actiepatronen. Een patroon realiseren waarbij je telkens naar je waarden terugkeert, hoe vaak je het contact er ook mee verliest.’

Psychological Flexibility
‘Deze 6 processen zijn geen op zichzelf staande processen, hoewel er om praktische redenen wel zo over gepraat wordt… Het is het vermogen om met het volle bewustzijn in het huidige moment te zijn en daarbij open te staan voor je ervaring en te handelen naar je waarden.’
This appendix contains the example texts of the content to illustrate the format of the design. These texts are also used in the prototype and the final design. The text is in Dutch. For the example texts within a topic, the topic of defusion is used.

[1] TEKST OEFENKAART

1a Kijken naar je denken: Ik heb de gedachte dat...

Ik heb de gedachte dat... Gedachten hebben de neiging mee te sleuren. Met deze oefening wilt u wat gezonde afstand nemen van al deze gedachten die uw verstand produceert.

Oefening Schrijf een negatief oordeel over uw tinnitus of uwzelf in een korte zin op, in de vorm ‘ik ben X’. Bijvoorbeeld: ‘ik ben een loser’ of ‘ik ben slachtoffer van mijn tinnitus’.

Ga nu helemaal op in die gedachte, laat u er helemaal in wegzakken en geloof de gedachte zo veel u kunt. Neem hier ongeveer 10 seconden de tijd voor.

Schrijf vervolgens hetzelfde negatieve oordeel op, maar nu in de vorm van: ik heb de gedachte dat.... Bijvoorbeeld: ‘ik heb de gedachte dat ik een slachtoffer van mijn tinnitus ben.’

Doe nu weer hetzelfde met deze gedachte: ga er helemaal in op, laat u er helemaal in wegzakken en geloof de gedachte zo veel u kunt. Neem hier ook weer ongeveer 10 seconden de tijd voor.

Wat merkt u op? Wat gebeurde er? Merkte u verschil? Merkte u dat u zich van de gedachte losmaakte of ontstond er een afstand tot de gedachte? Zo niet, doe dan de oefening nu nog eens met een andere gedachte.

Wat betekent dit? De eerste keer zit u in de gedachte en wordt u erdoor meegesleurd, de tweede keer voelt u waarschijnlijk wat meer ruimte; het komt minder hard binnen. Je verandert dus niks aan de inhoud van het denken, je gaat er alleen anders mee om. Afstand nemen van het denken zorgt ervoor dat u niet automatisch wordt meegesleept door alles wat uw verstand produceert. U kunt nu kiezen wat u wel of niet wilt doen met de gedachte.

Hoe kunt u hiermee aan de slag? U kunt dit de komende tijd tussendoor eens oefenen, en onderzoeken wat dat met u doet. Als u dat handig vindt, kun u het kaartje bij zich dragen of op een zichtbare plek plaatsen, zodat u herinnerd wordt aan deze oefening.

Tip Stel nu dat u een nare, pijnlijke of niet behulpzame gedachte hebt als ‘dit is allemaal te moeilijk.’ Als u die gedachte heeft, kunt u dan tegen uzelf zeggen: ‘ik heb de gedachte dat dit allemaal te moeilijk voor me is?’

Tip Probeer te praten over het denken door op te merken dat u een gedachte heeft. Bijvoorbeeld: ‘ik merk dat ik mezelf nu negatief beoordeel.’ Als u observeert wat uw gedachten allemaal over u te melden hebben, dan ontstaat er een afstand tussen u en het denken. Op die manier zullen negatieve oordelen u minder snel raken.

Tip Als variatie op de oefening, kunt u
   • uw stem opnemen en terugluisteren;
   • een (vervelende) zin met een gekke stem opzeggen, in slowmotion praten of zingen;

Experimenteer hier wat mee als u wilt, en kijk wat het met u doet. Als u het een rare oefening vindt, is ook dit weer een gedachte die u met een rare stem kunt uitspreken.
1b Kijken naar je denken: De meesterlijke verhalenverteller

De meesterlijke verhalenverteller
Ook als uw verstand u zegt dat u dingen niet kunt of aankunt, heeft u de keuze om deze dingen toch te doen. Afstand nemen van uw verstand door het een koosnaampje te geven kan hierbij goed werken, zeker als u bereid bent er af en toe een verhaal over te schrijven.

Oefening
Bedenk een koosnaampje voor uw verstand. Kunt u nu al een naam bedenken?

Vaak roept ons verstand gelijk ‘dat we een goede naam moeten bedenken.’ Herkent u die gedachte? Is het niet raar dat je verstand zich direct overal mee bemoeit?
Als u nog geen naam kunt bedenken, zullen we dan afspreken dat u binnen drie dagen een naam kiest? U kunt altijd nog van naam veranderen, dus desnoods neemt u een tijdelijke naam. Bent u bereid om te oefenen met dit idee?

Vaak vertelt ons verstand ons de raarste dingen. Sommige verhalen komen vaak terug, zoals een verhaal ‘dat je er weer niet uitziet vandaag.’ Het kan ook zijn dat je verstand dol is op rampscenario’s en dat het dus steevast vertelt dat dingen toch niet zullen lukken.

Het is belangrijk om deze verhalen van je verstand te herkennen, zodat u ze herkent als ze langs komen. Dus, welke verhalen vertelt uw verstand zoal?

Schrijf een verhaal van uw verstand op en gebruik daarbij de gekozen naam om uw verstand als eigen persoon aan te duiden.

Wat merkt u op?
Hoe was het om een verhaal van uw verstand op te schrijven?
Wat voor type is uw verstand: een doemdenker, een aandachtstreker, een toekomstvoorspeller? Of misschien nog iets heel anders.
En hoe is het verhaal als u het nu nog eens na leest?

Wat betekent dit?

Hoe kunt hiermee aan de slag?
Neem af en toe eens de tijd om stil te staan bij de verhalen van uw verstand, en schrijf ze bijvoorbeeld op. Weet dan dat het uw verstand is dat je deze verhalen probeert wijs te maken, als u het verhaal de volgende keer voorbij ziet komen!

Tip Kunt u de volgende keer, wanneer u opmerkt dat er een bekend verhaal voorbij komt, uw verstand (hardop) bedanken: ‘nou nou,..... , bedankt voor dit verhaal, maar hier trap ik deze keer niet in!’ of ‘....’.

Tip [...] Probeer niet de discussie aan te gaan met uw verstand: deze discussie heeft geen nut, aangezien uw verstand direct met nieuwe angstscenario’s zal komen aanzetten. Observeer wat uw verstand allemaal roept, herhaal het hardop, gebruik actief de formuleringen ‘mijn verstand zegt..’ en ‘.... roept de hele tijd..’ Op die manier komt u los van het denken en krijgt het denken daardoor minder macht.
Tips & Valkuilen - Kijken naar je denken

Blader dit regelmatig door!

Bent u met dit onderwerp bezig? Dan raden we u aan om regelmatig de Tips & Valkuilen door te nemen: deze ondersteunen u bij het oefenen.

Komt u een situatie tegen die u bij uzelf herkent, dan is de toelichting waarschijnlijk bruikbaar voor u.

2b Content

‘De pijnlijke gedachte verdwijnt, wat fijn! (Dit ga ik vaker zo doen)’
Vaak merken mensen bij het afstand nemen van hun gedachten, dat de pijnlijke gedachte verdwijnt, dat ze zich beter voelen, of beide. Dit is alleen niet het doel van de oefeningen! Het doel is om ruimte te creëren, zodat u kunt doen met een gedachte wat u wilt. Als een pijnlijke gedachte verdwijnt of u zicht beter voelt is dat een bonus: het zal alleen niet altijd gebeuren, dus dat kunt u niet altijd verwachten.

tip het kan handig voor u zijn om het onderwerp ‘De illusie van controle (nog) eens te bekijken.

‘Ik raak nog steeds verstrikt in mijn gedachten, wat doe ik fout?’
Dit is helemaal niet erg, en juist heel normaal! Het is niet mogelijk, en ook niet wenselijk om continu je gedachten te observeren. Het is de bedoeling om….

tip het kan handig voor u zijn om het onderwerp ‘Ruimte maken’ (nog) eens te bekijken.

‘Ik hoef dat niet te doen, lezen is genoeg.’ ‘Ik doe het straks wel.’
Met welke gedachten fuseert u?
Als u hier niet mee aan de slag gaat, gaat oefenen, kunt u nadenken over wat u heeft doen stoppen.
In welke gedachten raakte u verstrikt? Met welke gevoelens worstelde u of welke dingen deed u die u erbij in de weg stonden? […]

‘Maar deze gedachte is waar!’
Binnen het onderwerp Kijken naar je denken zijn we er niet zozeer in geïnteresseerd of uw gedachten waar zijn of niet, maar of ze helpen. Als u deze gedachte losjes vasthoudt, helpt hij u dan om het leven te leiden dat u wilt? Zal hij u helpen uw doelen te bereiken, uw relaties te verbeteren of de persoon te worden die u wilt zijn?

Tip we raden u aan om de uitleg bij dit onderwerp (nog eens) door te nemen.

‘Wat gaat dit mij opleveren?’
Wat je dit gaat brengen, wat voor effect dit heeft [op de lange termijn], wat het met u doet, kan niemand u vertellen: dat zult u echt zelf moeten ondervinden! En geef het ook de tijd om ermee te oefenen. Soms heeft het pas op een later moment effect. […]

Tip Wanneer u merkt dat deze gedachte blijft rondspoken, raden wij u aan om de onderwerpen ‘Ruimte maken’ en ‘Hier en nu zijn’ (nog) eens te bekijken.

‘Wanneer ben ik klaar?’
Afstand leren nemen van je denken, je gedachten voorbij laten gaan, je ratelende verstand opmerken en niet meer zo serieus nemen is een proces, een vaardigheid: er is daarom geen einde of een doel. Wel kunt u beter worden door te oefenen, vergelijk het maar met een sport. Het is daarom belangrijk om regelmatig te blijven oefenen.
Verdieping – Kijken naar je denken

Bent u met de opdrachten van dit onderwerp aan de slag geweest en wilt u graag meer?
In deze folder vindt u meer informatie en tips waar u naar op zoek kunt buiten deze box om: websites, boek titels, cursussen etc.

3b Content

Defusie en Acceptatie en Commitment Therapie
 Dit onderwerp heet eigenlijk ‘Defusie’ en is een onderdeel van Acceptatie en Commitment Therapie, oftewel ACT. ACT is ontwikkeld als een nieuw soort cognitieve gedragstherapie. ACT kun je ongeveer vertalen als ‘Acceptatie en toegewijde inzet therapie’. Het kan helpen om een meer accepterende en rustige houding te vinden bij onprettige dingen in het leven en meer gericht en betrokken actie te ondernemen om je leven prettiger te maken.

Wilt u meer oefeningen en vindt u het fijn zelfstandig aan de slag te gaan (en heeft u een smartphone of computer)?
Download een app gebaseerd op ACT. [...Lorum Ipsum...]

Wilt u meer informatie en uitleg over Defusie en ACT (en houdt u van lezen)?
Ga dan op zoek naar een van onderstaande titels: [...Lorum Ipsum...]

Wilt u graag meer begeleiding en persoonlijk advies?
Vind een goede psycholoog die bekend is met ACT.

Natuurlijk kunt u nog een afspraak maken in het Erasmus Medisch Centrum. Bel hiervoor naar 0010 70 35660 om een afspraak te maken. [...Lorum Ipsum...]

Mindfulness
 Dit onderwerp maakt deel uit van mindfulness. Mindfulness is [...Lorum Ipsum...]
4a Cover - Kijken naar je denken

Kijken naar je denken

Gedachten hebben we allemaal, maar wat doen die eigenlijk met ons? Welke invloed hebben ze? En is dat wel zo handig? Hoe gaat u eigenlijk om met uw gedachten?
Als u bereid bent om de oefeningen te doen, wie weet, ontdekt u dan dat veel van uw angsten en zorgen worden veroorzaakt door uw verstand, en niet door de werkelijkheid.

4b Introductie Kijken naar je denken

Hoe gaat u om met uw gedachten?

Dit onderwerp gaat over [...Lorum Ipsum...]

Dit is relevant voor tinnitus, omdat [...Lorum Ipsum...]

5a Cover

CD

Op deze CD kunt u alle geluidbestanden vinden die bij de oefeningen horen.

5b Content

Kijken naar je denken
[1] Het podium
[2] Bladeren op de rivier
[3] Als een vis in het water
[...Lorum Ipsum...]

Introductiefolder

In dit boekje worden het doel en het gebruik van deze toolkit uitgelegd.

Welkom!
[... Lorum Ipsum...]

Wat is het doel van deze toolkit?
[... Lorum Ipsum...]

Ontdek en onderzoek
Op welke manier kan ik hiermee aan de slag?
[... Lorum Ipsum...]

Aan de slag
Waaruit bestaat deze toolkit?
Deze toolkit bestaat uit 10 verschillende onderwerpen. Elk onderwerp zit in een apart doosje. Elk onderwerp bestaat uit:

Oefenkaarten - Op een oefenkaart staat een oefening die u kunt doen binnen een onderwerp.

Tips & Valkuilen - Tips & Valkuilen kunnen u helpen beter te oefenen met de oefenkaarten.

Verdieping - Verdieping kunt u bekijken als u graag meer informatie wilt over een oefenkaart of onderwerp.

Welk onderwerp zal ik oefenen?
Alle onderwerpen kunnen helpen in het leren leven met tinnitus. Of ze ook voor u helpen, is aan u om te ontdekken. U heeft vanuit de informatiebijeenkomst een advies gekregen over welk onderwerp nuttig voor u kan zijn: dit is een goede start.

Welke Oefenkaart zal ik doen?
Elke oefening is goed: het maakt niet uit waar u mee aan de slag gaat. Het is aan u om te ontdekken wat u prettig vind en bij u past. Om te beginnen, kunt u een kaart kiezen die u aanspreekt, of pak de bovenste kaart.

Wanneer zal ik oefenen?
Er zitten veel verschillende oefeningen in deze toolkit: hele korte, maar ook lange. Het verschilt ook per oefening hoe regelmatig u die het best kunt doen.
Om u hierbij te helpen, staat op elke Oefenkaart een indicatie van de tijdsduur van de oefening en een advies over de inzet.

**Uitleg bij de symbolen**
Tussendoor – Dit zijn erg korte oefeningen die nauwelijks tijd kosten.
Kort – Deze oefeningen duren iets langer: tussen de 10 en 30 minuten.
Lang – Dit zijn lange oefeningen: deze duren tussen de 30 en 60 minuten.

Vaak – Bij deze oefeningen raden wij u aan ze vaak te doen: elke dag is een goede richtlijn.
Regelmatig – Deze oefeningen hebben het beste effect als u ze regelmatig doet: enkele keren per week.
Soms – Dit type oefening raden wij u aan 1 a 2 keer per maand te doen. Of slechts een enkele keer is al voldoende.

**Tips**
Hieronder geven wij u een aantal tips voor het oefenen met deze toolkit. Neem deze regelmatig door!
Tip Probeer vooral nieuwe dingen uit! Wanneer u bekende dingen blijft doen, is de kans op verandering van uw situatie kleiner.
Tip Geef niet te snel op. Het kan een tijdje duren voordat u ergens een effect van merkt. Het is een proces dat tijd kost. Wees u hiervan bewust en verwacht geen wonderen.
Tip Als u een nieuwe oefening uitvoert en die ligt u niet, raden wij u aan om deze misschien toch nog eens te oefenen. Het kan zijn dat die na een paar keer toch erg prettig blijkt. Geef de oefening een kans!
Tip Doe rare dingen: dit helpt echt. Ook al zegt uw verstand dat u het net zo goed niet of in uw hoofd kunt doen.
Tip Kies juist ook oefeningen die u misschien niet zo aanspreken. De ervaring leert dat deze vaak effectief zijn.
Tip Kunt u een dag niet oefenen, omdat uw tinnitus zo luid is? [... Lorum Ipsum...]

[7] BOX

**100 Oefeningen**
**Leren leven met tinnitus**

Tinnitus Toolkit

**Tinnitus Toolkit**
Onderzoek en ontdek wat u kunt doen om te leren leven met uw tinnitus, zodat u minder last ervaart.

**Deze toolkit bevat:**
-100 oefenkaarten verdeeld over 10 onderwerpen
- tips en valkuilen om zelfstandig aan de slag te gaan
- en informatie voor als u meer wilt oefenen

Deze toolkit is een uitgave van het Erasmus MC. Het is een onderdeel van de informatiecursus ‘leren leven met tinnitus.’

[8] WRAPPER

**Tinnitus Toolkit**
Deze toolkit is een uitgave van het Erasmus MC. Het is een onderdeel van de informatiecursus ‘leren leven met tinnitus.’

**Exercise card**
100 pieces
350 grams

**Tips & Pitfalls**
10 pieces
250 grams

**In-depth Information**
10 pieces
135 grams

**Topic box**
10 pieces
330 grams

All dimensions are in mm
**Introduction folder**
1 piece
250 grams

**CD folder**
1 piece
250 grams

**Box**
1 piece
2 mm greyboard
135 grams silk

**Wrapper**
1 piece
135 grams

All dimensions are in mm
<table>
<thead>
<tr>
<th>Omschrijving</th>
<th>mappen</th>
<th>uitvoerkaart</th>
<th>kaarten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aantal soorten</td>
<td>10 soorten, 400 exemplaren per soort</td>
<td>10 soorten, 400 exemplaren per soort</td>
<td>100 soorten, 400 exemplaren per soort</td>
</tr>
<tr>
<td>Formaat</td>
<td>plano</td>
<td>plano</td>
<td>220 * 140 mm</td>
</tr>
<tr>
<td>Prepress</td>
<td>PDF wordt dor u aangeleverd, met 3 m afloop snijlijnen en in een aparte laag de stanstekening</td>
<td>PDF wordt dor u aangeleverd, met 3 m afloop snijlijnen.</td>
<td>PDF wordt dor u aangeleverd, met 3 m afloop snijlijnen en in een aparte laag de stanstekening</td>
</tr>
<tr>
<td>Bedrukking</td>
<td>tweezijdig in full colour</td>
<td>tweezijdig in full colour</td>
<td>tweezijdig in full colour</td>
</tr>
<tr>
<td>Papier</td>
<td>330 grams tweezijdig in full colour</td>
<td>135 grams Silk</td>
<td>350 grams Silk</td>
</tr>
<tr>
<td>Afwerking</td>
<td>stanzen - rillen en in elkaar plakken</td>
<td>3 slagen zigzag gevouwen + in slag navouwen naar 220*220</td>
<td>stanzen (ronde hoeken)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prijs</th>
<th>400* 1 soorten</th>
<th>400* 1 soorten</th>
<th>400* 100 soorten</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.364 euro</td>
<td>4.179 euro</td>
<td>6.849 euro</td>
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Rotterdam, 10 februari 2016
### 4 luik folder

<table>
<thead>
<tr>
<th>Omschrijving</th>
<th>4 luik folder</th>
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</thead>
<tbody>
<tr>
<td>Aantal soorten</td>
<td>10 soorten, 400 exemplaren per soort</td>
</tr>
<tr>
<td>Formaat</td>
<td>plano 560 * 220 mm, afgewerkt 140 * 220 mm</td>
</tr>
<tr>
<td>Prepress</td>
<td>PDF wordt u aangeleverd, met 3 m afloop snijlijnen en in een aparte laag de stanstekening</td>
</tr>
<tr>
<td>Bedrukking</td>
<td>tweezijdig in full colour</td>
</tr>
<tr>
<td>Papier</td>
<td>250 grams Silk</td>
</tr>
<tr>
<td>Afwerking</td>
<td>1 sla vouwen naar afgewerkt formaat en rondhoeken</td>
</tr>
<tr>
<td>Prijs</td>
<td>400 exemplaren * 10 soorten 3,349 euro</td>
</tr>
</tbody>
</table>

### Intro folder

<table>
<thead>
<tr>
<th>Omschrijving</th>
<th>intro folder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aantal soorten</td>
<td>400 exemplaren per soort</td>
</tr>
<tr>
<td>Formaat</td>
<td>plano 290 * 225 mm, afgewerkt 145 * 225 mm</td>
</tr>
<tr>
<td>Prepress</td>
<td>PDF wordt u aangeleverd, met 3 m afloop snijlijnen</td>
</tr>
<tr>
<td>Bedrukking</td>
<td>tweezijdig in full colour</td>
</tr>
<tr>
<td>Papier</td>
<td>250 grams Silk</td>
</tr>
<tr>
<td>Afwerking</td>
<td>1 slagvouwen naar afgewerkt formaat</td>
</tr>
<tr>
<td>Prijs</td>
<td>400 exemplaren 473 euro</td>
</tr>
</tbody>
</table>

### DVD folder

<table>
<thead>
<tr>
<th>Omschrijving</th>
<th>DVD folder</th>
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</thead>
<tbody>
<tr>
<td>Aantal soorten</td>
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<tr>
<td>Formaat</td>
<td>plano 435 * 225 mm, afgewerkt 145 * 220 mm</td>
</tr>
<tr>
<td>Prepress</td>
<td>PDF wordt u aangeleverd, met 3 m afloop snijlijnen en in een aparte laag de stanstekening</td>
</tr>
<tr>
<td>Bedrukking</td>
<td>tweezijdig in full colour</td>
</tr>
<tr>
<td>Papier</td>
<td>250 grams Silk</td>
</tr>
<tr>
<td>Afwerking</td>
<td>stanzen, 1 pagina naar binnen dichtplakken</td>
</tr>
<tr>
<td>Prijs</td>
<td>400 exemplaren 1,105 euro</td>
</tr>
</tbody>
</table>

### Wikkel

<table>
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<tr>
<th>Omschrijving</th>
<th>Wikkel</th>
</tr>
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<tbody>
<tr>
<td>Aantal soorten</td>
<td>400 exemplaren</td>
</tr>
<tr>
<td>Formaat</td>
<td>574 * 140 mm</td>
</tr>
<tr>
<td>Prepress</td>
<td>PDF wordt u aangeleverd enkelzijdig in full colour</td>
</tr>
<tr>
<td>Bedrukking</td>
<td>eenzijdig in full colour</td>
</tr>
<tr>
<td>Papier</td>
<td>135 grams Silk</td>
</tr>
<tr>
<td>Afwerking</td>
<td>schoonsnijden</td>
</tr>
<tr>
<td>Prijs</td>
<td>400 exemplaren 558 euro</td>
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</tbody>
</table>

### Casette

<table>
<thead>
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<th>Omschrijving</th>
<th>Casette</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aantal soorten</td>
<td>400 exemplaren</td>
</tr>
<tr>
<td>Formaat</td>
<td>Plano 518 * 378 mm, afgewerkt 235 * 110 * 149 mm</td>
</tr>
<tr>
<td>Prepress</td>
<td>PDF wordt u aangeleverd</td>
</tr>
<tr>
<td>Bedrukking</td>
<td>eenzijdig in full colour + matlaminat</td>
</tr>
<tr>
<td>Papier</td>
<td>135 grams Silk</td>
</tr>
<tr>
<td>Afwerking</td>
<td>stanzen en casheren Cassette vervaardigt van 2 mm grijsbord.</td>
</tr>
<tr>
<td>Prijs</td>
<td>400 exemplaren 3,842 euro</td>
</tr>
</tbody>
</table>
Omschrijving
Handling
Per cassette komen er 10 verschillende mappen in, elke map heeft 10 verschillende kaarten + 4 luikfolder + 1 uitvouwkaart.
Per cassette 1 DVD folder en intro folder insteken. Geheel omwikkel met de wikkel.

Prijs
400 sets samenstellen
1.212 euro

Hopende u voldoende te hebben geinformeerd, mocht u nog vragen hebben dan verneem ik die graag.

Met vriendelijke groet

Iris van der Meer
Studio Manager
Canon Business Services

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