minddistrict

How we develop interventions

Everything about intervention mapping

Intervention mapping

Have your modules been proven to actually work? What are your modules based on? Those are questions Minddistrict receives fairly often. A large part of the answer to these questions can be found in our development process - the so-called 'intervention mapping'.

Developments in the fast paced world of ehealth

Every day, we improve the quality of the content and the user-friendliness of our product. Because of the fast pace of developments, the classic ways of validation aren't always an option - testing the effectiveness of a specific module on a large test group takes months or even years to accomplish. In the meantime, Minddistrict has included the latest psychological research into the module, new functionalities have been added, and we have created more videos to increase recognition and acknowledgement within the module.

By the time the effectiveness of a module has been demonstrated using traditional means of validation, it is actually outdated.

Structured development process

But then what? We still want to be sure that our modules are of the highest quality, that they have a solid foundation, and that users truly benefit from them. That's why we use the detailed and elaborate development process of intervention mapping[1] (see CEHRES[2] and Logic Modeling[3]). Intervention mapping forces us to conduct a meticulous research to existing evidence-based methods and theories, and to create the best possible modules from them.

What is intervention mapping?

Sounds good, but what is intervention mapping exactly? It is a development process that consists of 6 steps. As soon as it is decided that Minddistrict will develop a module on a certain topic, we start the first step. At first, the emphasis is on gathering information: what has been written about this subject, what do experts say and what are the actual problems that service users cope with in their daily lives? Once that has been thoroughly researched, the goals for the module are set and a concept is drafted. Then the production of the module starts, and implementation and evaluation phases follow.

The 6 steps

Within Minddistrict, the intervention developers receive extensive training in the concept of intervention mapping - only then do they start creating modules. The 6 steps are as follows:

Needs analysis: The problems and needs of users are investigated with the help of literary research and interviews with patients, therapists or coaches, and other experts.

For example: as part of this step we interview patients and therapists. We ask patients to explain more about the subject: what do they experience in their daily lives? What hinders them, and what helps them? Etc. Therapists are asked about what they need to perform treatment: a module that connects with the therapy they give, a self-help module, or anything else.

Setting goals: What is the goal of the module? What do we want people to have achieved at the end of the module, after they've made all their assignments, read the information and saw the videos? Based on the problems and needs of the patient, goals are set in the area of cognition, emotion and behavioural change.

For example: it can be the goal of a module to let the user following it take small steps towards a more active life.

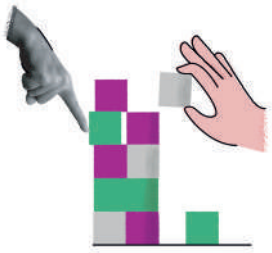
Developing the concept: We draft a concept of the intervention - the needs, knowledge and goals are converted to a concept with effective elements. What needs to be tackled first? What is the order of the subjects? We think about this per page. On every page, we consider which behavioural change techniques to employ. We use Michie's Behavioural Change Techniques[4] (BCT's) for this.

For example: the first 2 phases of a new module about depression show that people first need to know what depression is, and that they need to know that there are more people who experience the same as what they are experiencing (recognition and acknowledgement). The concept then can look like this:

- Page 1: Psycho-education about depression. Used BCT: Knowledge;
- Page 2: You are not alone. Used BCT: Social support;
- And so on.

Production: The concept now needs to be translated to factual content. In this phase, the text is written, exercises are developed, animations are created, and videos with experts and patients are recorded. The text is written in a solution-based manner and the intelligibility is tuned to the target audience.

For example: in the concept, we concluded that an animation is a good way to deliver psycho-education. Now we start brainstorming about how we can explain a complex concept in an animation. With the animator, a storyboard is drafted, and after several rounds of feedback, the final animation is created and added to the intervention.



Implementation: The developed product will be implemented and tested to gather information about user satisfaction.

For example: several departments of the organisation that requested the module are going to use the intervention in patient care. This way, user experiences are gathered, and remarks and points of improvement are passed on to Minddistrict.

Evaluation: The data from the user satisfaction research are used to evaluate the product. This can vary from the wish to adjust certain wording or pictures, to the wish to add extra subjects. Where necessary, the steps of the development process are repeated. Then the module receives its adjustments.

For example: after using the module, therapists learned that people with anxiety sometimes take a sedative that can influence the outcome of treatment, but don't discuss the sedative with them. This wasn't part of the anxiety module. Therefore, a chapter on the use of sedatives was developed according to the intervention mapping process and added to the new version of the module.

The benefits of intervention mapping

+ **A detailed development process helps to control all factors within intervention development.** Continuous monitoring ensures no important aspects or steps are skipped. In addition, the process guarantees a further development of the digital intervention through evaluation.

+ **The process encourages choices made based on data.** This makes it possible to document in an unequivocal way how the intervention came about, and makes duplication and quality assessment easier.

+ **Research, practice and development have an equal share in the development process.** The process provides a framework for collaboration in which the various disciplines actively contribute.

Conclusion

To ensure that our modules are of the highest quality, and because validation in the classic method is hard to match with the speed of new developments, Minddistrict uses intervention mapping. This is a solid process that safeguards that our modules are evidence-based, and that takes into account the experiences from the field and from (future) users.

The 6 steps of the process are meticulously followed by employees who have received extensive training in intervention mapping. With this in-depth foundation, we can create the best possible digital interventions.

[1] *Bartholomew, L. K., Parcel, G. S., Kok, G., Gottlieb, N. H., & Fernandez, M. E. (2011). Planning health promotion programs: an intervention mapping approach. John Wiley & Sons.*

[2] *van Velsen, L., Wentzel, M., & van Gemert-Pijnen, J. (2013). Designing eHealth that Matters via a Multidisciplinary Requirements Development Approach. JMIR research protocols, 2 (1). e21.*

[3] *Knowlton, L. W., & Phillips, C. C. (2009). The logic model guidebook: Better strategies for great results. Los Angeles: Sage.*

[4] *Abraham, C., & Michie, S. (2008). A taxonomy of behavior change techniques used in interventions. Health psychology, 27(3), 379.*

Would you like to learn more about our modules?

Feel free to get in touch with us.

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