

NiceDay Research Vision



Index

1.	Introduction	3
2.	The NiceDay Way: a data-driven approach	4
3.	Improving therapists' workflow	5
4.	Measure client progress	5
5.	Optimizing treatment	6
6.	Collaboration	7
7.	Main Research Questions	9

Introduction

Since the birth of NiceDay in 2017, our main aim has been to push mental healthcare to the next level: making treatment more effective and personal for clients and empowering therapists to continue to develop and become more skilled, all while keeping mental healthcare cost-effective. To do this we have set up an entirely new care concept for (digital) mental healthcare. We have discovered the benefits of this digital mental healthcare service: a more effective treatment for clients, an improved therapist's workflow and a greater reach and positive impact to society.

Since then, many research questions have been proposed spanning a wide variety of topics. Thinking of a new innovative concept to improve mental healthcare is valuable, but it is important to also scientifically prove it is actually effective. Some of these questions have already been answered, but there is still work that remains to be done to research the effectiveness of our new way of working. This is why we are interested in collaborating with other teams who want to make a significant contribution to mental healthcare and strive for effective, personal, accessible and affordable care for all. Below we share with you the main elements of NiceDay we want to address and learn more about.



The NiceDay Way: a data-driven approach

NiceDay offers a care concept and platform that is accessible at any time and place, and can be used for online or blended care, perfectly fitting our hybrid and dynamic society. The NiceDay care concept (The NiceDay way) in combination with the NiceDay digital platform introduces a new and innovative way of working based on evidence-based practices in psychopathology such as CBT, experience sampling methodology (ESM) and feedback informed treatment.

When working according to the NiceDay Way, clients are actively involved in the therapeutic process by tracking symptoms, feelings and behaviours, and writing diary entries. By using ESM, clients and therapists are able to get an 'in the moment' account of the clients' subjective experiences and can contextualise these in terms of psychological, social and environmental factors. These factors are visualised for both therapists and clients, and quickly provide insight into the relationship between symptoms, vulnerabilities and resilience. This helps therapists to make informed decisions on the most appropriate interventions and help them apply them at the most optimal time. These practices increase the learning effect, the generalizability, and the ecological validity of these interventions. Furthermore, NiceDay uses Feedback Informed Therapy for gathering input on the therapeutic relationship and progress of care through short routine outcome questionnaires which are administered before and after a therapeutic session. In this way it can be evaluated whether the treatment is still 'on track' and therapeutic drift is prevented.

These new insights and skills help to prevent relapse, a major problem within mental health care. By means of the app the client can make a relapse prevention plan independently to reduce the likelihood of symptoms returning.

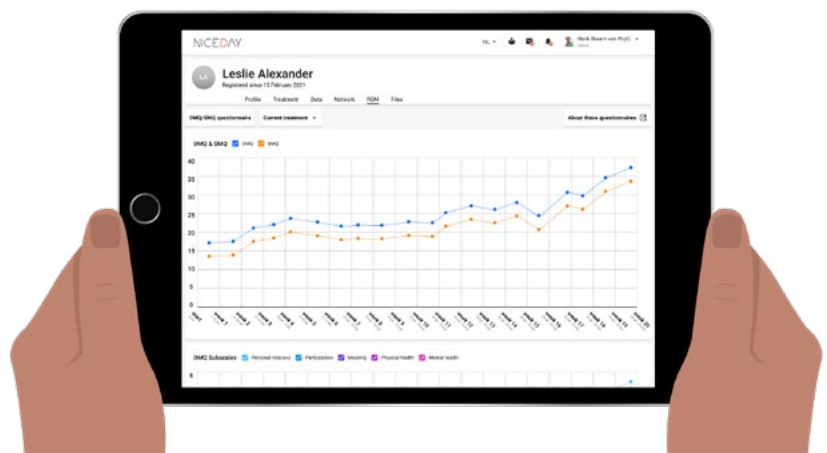
Improving therapists' workflow

Therapists are trained to adopt the NiceDay Way of working and make effective use of the platforms' tools and features that facilitate this way of working. For example, by using a flexible agenda in which they have dedicated time (called flexible time) outside of their scheduled meetings to check their clients recent activity and current mental state on a dashboard. Flexible time enables them to also contact their clients via chat when necessary, or when it seems most effective. This allows therapists to easily and naturally connect, keep track of and treat clients.

Just as the therapist can contact the client via chat, the client can also use chat to maintain regular contact with their therapist. This stimulates an equal relationship between client and therapist, inducing client autonomy and improving the therapeutic alliance.

Measure client progress

Client autonomy is further promoted by evaluating on a regular basis, preferably on each scheduled meeting, whether the treatment is still on track. This is done by inviting the client to fill in two very short questionnaires before and after each meeting: the Outcome Measure Questionnaire (OMQ) and Session Measure Questionnaire (SMQ). These short questionnaires measure client progress and the working alliance respectively. They are based on Feedback Informed Therapy. There is sufficient evidence that shows the benefits of keeping track in near real-time of what is and what is not working in treatment^{[1][2]}, and therefore gives the possibility of making data-supported refinements in the treatment plan.



Optimising treatment

To keep on optimising mental health care, we need to investigate these separate ingredients of the NiceDay Way of working (e.g., use of diary, daily tracking and registering of symptoms, chat-functions, outcome feedback, and frequency of in-between session contact) to analyse what each of them add to the effectiveness of treatment. Outcome parameters will not only be client-related, e.g., decrease in symptoms and increase of quality of life, but also therapist-related. Therapist-related parameters concern, for example, the sense of control they experience on the treatment process, job satisfaction but also their productivity; is the NiceDay Way a (cost)effective way of treating clients?

Future optimisations

This is also where – in the future - Artificial Intelligence (AI) and Machine Learning can play an important role. Continuous data-input offers us the possibility to develop AI-based decision-support tools for therapists. We could develop algorithms that learn from datasets to then generate models that can detect ‘signal cases’ and make predictions of the best fitting evidence-based interventions. In this way, therapists are supported to provide optimal treatment and to prevent therapeutic ‘drifting’, resulting in clients not (optimally) receiving the treatment they deserve, with all entailing personal and social consequences. We believe that developing an AI-decision tool increases the (cost)effectiveness of treatments, also by keeping therapists ‘on-track’ and improving their skills.

Collaboration

NiceDay has a track record of successful and innovative research projects in collaboration with cross-disciplinary organisations. We have experience with funding programs and have been awarded research grants from Dutch and European bodies, including Eureka Eurostars, MIT R&D, FP7 and H2020 (in partnership with our parent company Almende).

We are actively looking for collaborations with members of:



Healthcare organisations (GGZ), willing to investigate and experiment with new and better ways of working and participating in clinical trials;



Academic institutions, aiming to contribute to the formulation of novel research hypotheses, build frameworks to model new theories in psychology, and contribute to statistical analysis;



Tech companies, willing to collaborate on applied research in healthcare such as by incorporating wearable technology in treatment and by developing decision support algorithms or tools.

If you see a potential collaboration, send us a mail at research@nicedaynederland.nl

- we are happy to hear from you.

Reasons to join

Cooperation with us has the following advantages:

- You will push online mental healthcare to the next level; by contributing to solutions to fix the issues the GGZ is facing like long waiting lists and relapsing.
- You can make use of our newly evidence-based developed treatment protocols.
- You become a partner or lead new research projects - which can be tailored so that they match your research agenda - and
- Receive funding for research and innovation when a grant is awarded.
- You increase the visibility of your organisation as a result of research publications and findings.

- You can make direct use of the amended protocol and research results to:
 - improve treatment (cost-)effectiveness
 - reduce overhead for therapists and increase their job satisfaction
 - increase the therapeutic experience of therapists and clients.

We hope this collaboration will create a 'cycle of improvement', in which research output will continuously generate new research ideas.

Requirements

Being part of this movement and collaborating in research takes dedication and commitment. So here are the requirements in collaborating:

- Team up in applications for grants and subsidies.
- Collaborate in conducting research studies on topics that align our vision of improving mental healthcare.
- Work together in the writing of peer-reviewed joint research publications.

Are you a potential GGZ partner? Then the following requirements are for you:

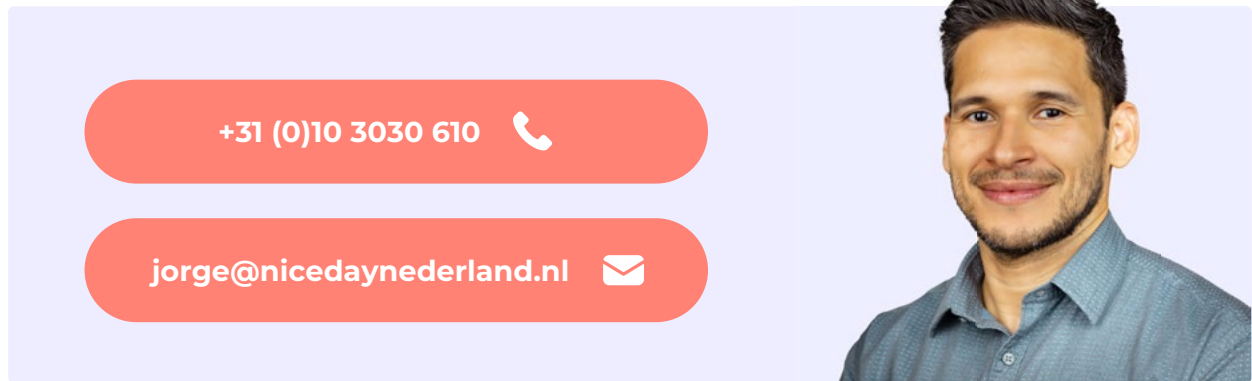
- Work according to the NiceDay Way protocols.
- Collaborate with therapist training.
- Apply feedback informed therapy (e.g make use of OMQ and SMQ questionnaires).
- Make use of NiceDay tools such as treatment status, trackers and planned sessions.
- Share treatment-related data (such as demographics, clinical variables and ROM outcomes) in accordance with GDPR and other EU regulations for scientific validation and research purposes.

Main Research Questions

In order to further validate and develop the NiceDay Way and generate evidence for this visionary way of working, we have formulated the following research agenda:

- Investigating to what extent the different unique factors of NiceDay (e.g. feedback informed treatment, outcome measurements, continuous registrations, ecological valid interventions, intermediate contact) add to the effectiveness of the intervention and prevent relapse.
- Comparing the NiceDay sensing and logging in terms of disruptiveness, effectiveness, acceptability, feasibility and efficiency to other measurement approaches in the long-term.
- Investigate if working according to the NiceDay Way promotes clients' autonomy and empowers them.
- Investigating the (cost-) effectiveness of the NiceDay Way
- Researching the use of wearable devices and biosensing technologies in healthcare treatments.
- Evaluating the incorporation of decision support tools in treatment that make use of explainable AI systems. Some subjects include:
 - Investigating if active (trackers and registrations) and passive (sleeping and physical activity patterns) sensing via automatic feedback can promote mental well-being in the client without interventions of the therapist, and can serve as a form of unguided maintenance therapy
 - Investigating if active (trackers and registrations) and passive (sleeping and physical activity patterns) sensing via automatic feedback provide therapists automatic feedback to detect 'signal cases', and on which interventions are needed to increase treatment effectiveness or reduce risk of relapse
 - Data-driven client prioritisation tools for therapists that can provide early warning signals from clients and nudge therapists when to intervene.
 - Personalised coaching.

Would you like to discuss the information in this document or reach out for a potential collaboration? Please contact **Jorge Luis Reyes Ortiz**. He looks forward to talking with you.



A light blue rectangular box containing contact information. On the left, there are two red rounded rectangular buttons. The top button contains the phone number '+31 (0)10 3030 610' and a white telephone handset icon. The bottom button contains the email address 'jorge@nicedaynederland.nl' and a white envelope icon. On the right side of the box is a portrait photograph of a man with short dark hair and a light beard, wearing a blue button-down shirt.