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THE FINNISH THERAPY NAVIGATOR – DIGITAL SUPPORT SYSTEM FOR INTRODUCING STEPPED CARE IN FINLAND

ABSTRACT

Introduction: The need to improve quick access to effective psychological treatments is urgent. Success requires effective tools for identifying what kind of therapies an individual is likely to benefit from and managing a comprehensive therapy offering that matches an individual's needs. First-line therapies initiative (Terapiat etulinjaan-toimintamalli) is a national initiative started 2020 in Finland. It aims to help Finnish regions in building locally sustainable stepped care systems and providing the support services needed. One key service of First-line therapies initiative is the Finnish therapy navigator (FTN). The FTN is a digital tool to help assess individual needs for psychosocial treatments and to build a regionally sustainable stepped care treatment offering, as part of the national reform of social and health services. This paper describes the development, content, implementation and feasibility of the FTN. *Materials and Methods:* The system was piloted in six regions in Finland between October 2021 and May 2022, with a catchment area of around 600 000. The feasibility data was collected from professionals ($n = 48$) using the system at 1 and 4 months after implementation, and from the anonymous FTN responses ($n = 2630$). *Results:* Professionals estimated the FTN had a positive impact on their work, quality of assessment and notes, and patient experience at 1 month after starting to use the FTN. Satisfaction scores improved further at 4 months, and 93% of users wanted to keep FTN as a permanent tool. The mean time patients used to fill the FTN was 24 minutes; 75% of clinical interviews lasted under 30 minutes. The FTN provides important data on treatment seekers. In our sample 57% of respondents scored between 10-19 points on PHQ-9 and 59% between 5-14 on GAD-7, suggesting mild-to-moderate depressive and anxiety symptoms. 28% reported no previous psychosocial treatments and 33% previous treatments shorter than 6 months. Thus, it seems that a significant proportion of treatment seekers in Finland could benefit from readily available, short-term, evidence-based psychosocial treatments that the First-line therapies initiative supports. *Conclusions:* FTN is a feasible tool for first assessment of mental health issues in primary care. Implemented and localized using the manualized co-creation process results in very high user satisfaction and acceptability of the system. The FTN provides important real-time data on mental health treatment seekers to support service development and planning. The First-line therapies model that includes introducing FTN in combination with regionally adapted care pathway development, education in short evidence-based psychological interventions and increase in use of digital support systems appears a feasible way to build regionally sustainable stepped systems.

KEY WORDS: MENTAL HEALTH CARE, FIRST-LINE THERAPIES INITIATIVE, DIGITAL ASSESSMENT, STRATIFIED CARE, PSYCHOSOCIAL INTERVENTION

1. INTRODUCTION

A solid body of evidence supports the cost-effectiveness of psychotherapeutic interventions for mental disorders (1–3). Nevertheless, organizing a comprehensive psychotherapeutic service that can implement evidence-based treatment methods and realize measurable benefits in real-life is complicated (4–6). One key component of success is the ability to coordinate evaluation and treatment initiation so that patients are directed to the correct form and intensity of treatment in optimal time (7).

Optimization of psychotherapeutic interventions on a systems level is exceptionally hard. Interventions are often provided on many levels of healthcare systems in complex multiple provider settings. Numerous interventions are used for the same health problem, the choice often depending more on provider orientation than patient needs. To manage a psychotherapy service system in an evidence-based manner, one should be able to consider treatment availability, waiting times, the process of matching patients to therapists, therapy process, multidimensional outcomes and side effects, costs and personnel issues. This data collection should start from the moment a person seeks help for the first time.

Treatment optimization can be done following a stepped care model (always trying less intensive treatments first) or a stratified model (trying to start optimally effective treatments directly). Both stepped and *stratified* approaches can be optimized using a plethora of variables yielding a variety of different algorithms. Simplified, a system optimized on effectiveness or patient satisfaction may look different from a system optimized on costs. In publicly-funded healthcare systems like Finland's, the aim should be to try to optimize the cost-effectiveness on system level, while ensuring no individual is left out of necessary services. This naturally leads to a *modified stepped care* model, where patients are allowed to skip steps, based on professional evaluation of individual needs.

One option to manage complexity is to create a new, separate health system for psychotherapy, like the improving access to psychological therapies (IAPT) model in the UK. Another one is to try to guide each patient individually, based on data, within an existing complex system. For this purpose, we created the Finnish Therapy Navigator (FTN), a digitally supported system for structuring the assessment of treatment needs and creating optimized stepped care systems out of locally varying treatment options.

The Finnish healthcare system is undergoing a thorough reform in 2023 that centralizes responsibility for health

services from 330 municipalities to 21 regions. To help with this transformation, the Finnish government is funding development of the First-line Therapies (Terapiat etulinjaan - toimintamalli), a national initiative coordinated by Helsinki University Hospital.

The First-line therapies model provides comprehensive services for creating and maintaining a stepped care model of evidence-based psychosocial treatments appropriate for Finnish healthcare structures. Services provided in addition to the FTN include a common gateway to digital self-help programmes, psychoeducation and materials for professionals (www.mielenterveystalo.fi), a national web-based education system for evidence-based psychosocial treatments, quality registry and several layers of co-creation and coaching structures.

INTERNATIONAL BENCHMARKING OF DIGITAL THERAPY GUIDANCE SYSTEMS

Optimizing therapy at an individual level is subject to great research interest (8). Specific factors such as diagnosis and therapy framework appear to explain only a minor part of the variation in treatment effects (9). Optimizing the so-called common factors (e.g., trust, alliance, common understanding of therapy goals and methods) is likely to be important, as they account for a large proportion of variance in therapy outcomes (10–12). Thus, the “therapy navigator” should be able to guide the individual to optimal treatment and predict individual outcomes and also try to boost the non-specific determinants of treatment effects, for example, by considering patient preferences, expectancies, timing and local circumstances, like availability of different treatment modalities.

The final aim of therapy guidance systems is to optimize therapy outcome for the individual. Internationally there are a few digitally supported systems for this. One such is the Decision Support Tool (DST), developed in an Australian stepped care approach Link-Me and its predecessor Target-D (13). DST consists of an individual's responses to 23 items which assess psychosocial factors such as gender, mental health history and current symptoms, general health, living situation and financial security. According to the responses the DST stratifies individuals into minimal/mild, moderate or severe symptom prognostic groups. Then the Link-Me guidelines can be used to choose a treatment pathway depending on the predicted symptom severity, either for low intensity or high intensity care. DST has shown promising results for reducing depressive symptoms over 3 months

and psychological distress with prognosis-matched care compared to treatment as usual (13,14).

Another web-based tool offering digital mental health triage and treatment recommendations is StepCare, which aims to assist the provision of a stepped care approach and digital mental health intervention delivery in Australian general practice setting (15). StepCare screens individuals for symptoms of depression (PHQ-9) and anxiety (GAD-7) and it includes sociodemographic and prior treatment-related questions. StepCare provides general practitioners with 3-step treatment recommendations matched in intensity to the level of symptom-based need. In another stepped care setting, the North American Stepped Care 2.0 model applies a brief intake assessment that uses the Behavioural Health Measure (BHM-20/43), an electronic client-report questionnaire that assesses behavioural health and can be completed on tablets in the waiting room during first walk-in (16). In Stepped Care 2.0 patients start with the lowest intensity or the step of care that fits their needs. The patients' level of readiness and preference of care primarily guides treatment decisions, with Stepped Care 2.0 relying less on symptom severity and complexity.

Recent sophisticated methods to guide treatment selection utilize prognostic indices (PIs) or machine learning to predict whether a patient will recover with a given treatment (17,18). PIs have been used, for example, to develop models of case complexity to enable mental health providers and clinicians to select low or high intensity treatments in stratified care settings (19,20). One such example is the Leeds Risk Index (LRI), a tool to assess whether a patient has a low, moderate or high risk of poor response to psychological treatment (21). Preliminary research indicates that early case complexity detection and high intensity intervention matching could have the potential to improve overall treatment outcomes, although this is still unclear (19,22).

The FTN, in brief, focuses on clinical prognostic indicators by collecting information on current symptoms, as well as prior treatment, current social and working ability and treatment preferences. The FTN also considers possible traumatic events and recent crises and life events. This information is then summarized for the interviewing clinician, who uses it according to the First-line Therapies manual to identify optimal stepped care options.

This paper describes the rationale, development, piloting and initial results of using the FTN.

2. DEVELOPMENT OF THE FINNISH THERAPY NAVIGATOR

The FTN was developed in a government-funded First-line Therapies (Terapiat etulinjaan) initiative. This initiative has built a comprehensive stepped care therapy model and support services needed to implement it in Finnish primary care, as part of the ongoing national social and healthcare reform. The FTN is a key element of the system.

Separate versions of the FTN are developed for adults, adolescents and children. This paper describes the development and pilot results of the adult version.

DESIGN OBJECTIVES

The FTN for adults was created to support an efficient first-line assessment process combined with a stepped care model, with high acceptability for professionals and patients to facilitate voluntary and sustained use of the system. Key system level objectives were those of the First-line therapies initiative, i.e., to increase the use of readily available, evidence-based psychosocial treatments and introduce a stepped care model into Finnish primary care. Key design principles of the system were the following:

The target group for FTN was primary care service users, and thus the instrument facilitates assessment for common mental health problems that can be treated in primary care and can benefit from fast treatment initiation and low intensity treatments: depression, anxiety, sleep disturbance or fatigue symptoms. Conversely, people with neuropsychiatric disorders, bipolar disorder, eating disorders, psychotic disorders or severe substance abuse disorders, were not the primary target population. These conditions are more rare than depressive and anxiety disorders in primary care, and not ideally treated with low intensity therapies.

The efficiency of the assessment was increased by pre-collecting and pre-organizing key patient information for the assessing clinician. The patient seeking help is asked to fill in the FTN prior to the meeting with a healthcare professional. The assessing clinician has access to the information and is then able to complete the assessment with a 10–20-minute semi-structured interview by phone. Patients eligible for low intensity interventions can be directly referred to treatment, allowing for swift treatment initiation and redistribution of professionals' time from assessment to treatment.

The primary target symptom for intervention needed to be identified in the initial assessment, as many manualized low intensity psychological treatments are symptom specific.

Depression, sleep disturbance and exhaustion were each considered possible target symptoms. Anxiety was divided into generalized anxiety, social anxiety, panic symptoms, obsessive-compulsive (OCD) symptoms and post-traumatic symptoms.

A stepped care model with 4 steps was designed with Step 1 indicating the lowest treatment intensity (see [Figure 3](#)). Steps 1 and 2 were designed for rapid treatment initiation without the delay of a mandatory physician-assessed diagnosis, following the First-line Therapies model. The FTN would not force a choice between steps, but the FTN and the accompanying user manual would give guidelines for choosing the ideal step. The most suitable intervention on that step would be chosen collaboratively.

For acceptable user experience, the length of the FTN was limited by prioritizing information most essential for the assessment criteria and omitting rare mental health problems from the screening. This is in line with the “self-correcting” properties of the stepped care model, i.e., that the patient should be referred to a physician assessment and/or higher intensity treatments, if he/she would not recover with low intensity treatments.

Anonymity was a key design feature of the system. The aim is to lower the threshold to seek help and build a pathway to the rapidly evolving field of digital self-help programmes and other resources, the development of which is also included in the First-line Therapies initiative.

THE FTN ASSESSMENT INSTRUMENT

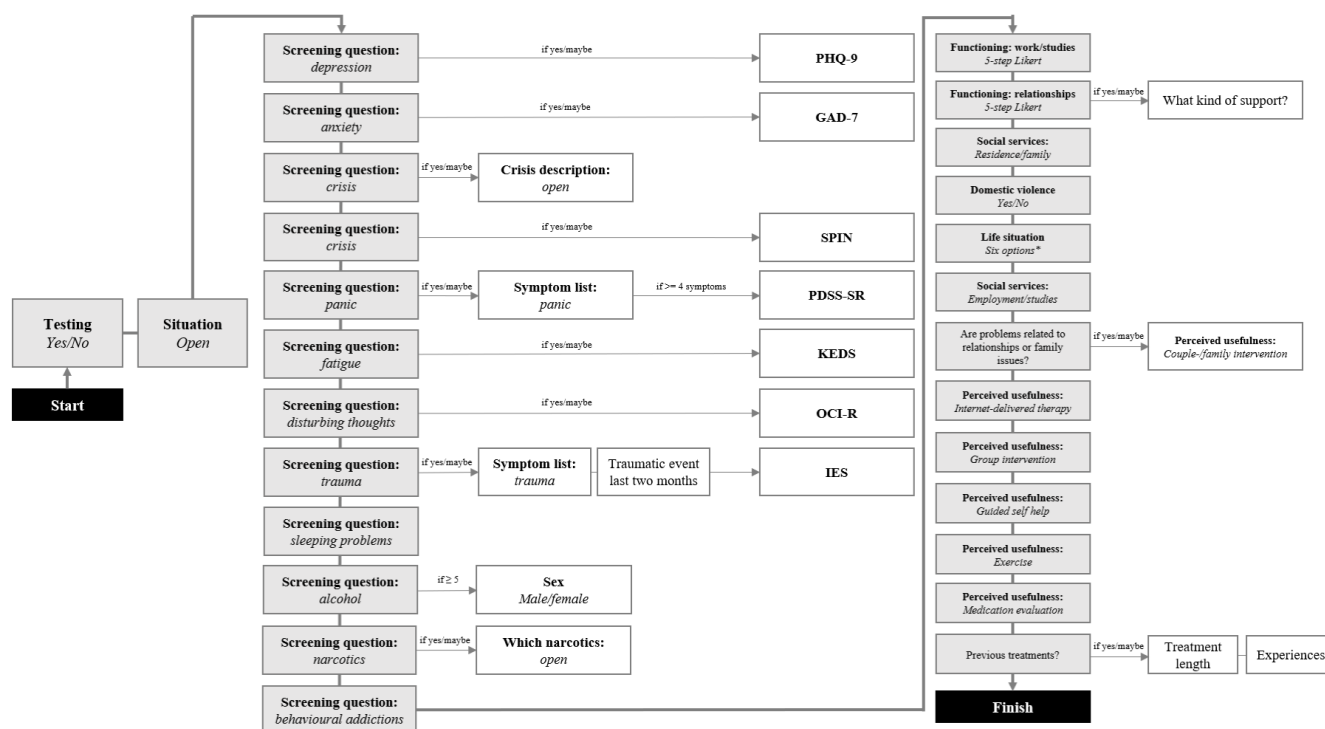
The FTN aims to improve the quality and expedite the process of first assessment. Therefore, the system contains instruments measuring not only symptoms, but also self-reported problem description, significant life events, social and vocational functioning, previous treatments and need for social or vocational support services. Treatment preferences are specifically inquired concerning internet-delivered therapy, group interventions, guided self-help, physical exercise, medications and short couples or family interventions in the case of couples- or family-related problems. The FTN consists of a decision tree which is modified based on the responses of the user ([Figure 1](#)).

First, the user declares whether they are just testing the system or not. Next, the user gives an overview of their current situation and then continues to the screening questions. The user is instructed not to fill in any identifiable information to maintain anonymity.

The psychometric instruments were selected from internationally and nationally validated questionnaires. To minimize burden to patients, each psychometric instrument is preceded with a screening question, with full instrument opened to screen-positives. To minimize false-negatives the screening questions have three answer options, with both ‘yes’ and ‘maybe’ responses opening the full instruments. This provides the option to tighten screening criteria for future versions if indicated by data.

Some themes only include screening questions, and the problem is addressed in more detail during the interview. Only a brief history of previous psychological treatments and their overall length was included to maintain anonymity.

Figure 1. The content and flow chart of FTN. Abbreviations: PHQ-9: Patient Health Questionnaire, GAD-7: Generalized Anxiety Disorder 7-item scale, SPIN: Social Phobia Inventory, PDSS-SR: Panic Disorder Severity Scale Self-Report, KEDS: Karolinska Exhaustion Disorder Scale, OCI-R: Obsessive-Compulsive Inventory –Revised, IES: Impact of Event Scale – Revised, AUDIT-C: Alcohol Use Disorders Identification Test-Concise



In accordance with the Finnish aims to integrate social and health services, several screening questions related to potential need for social services were also included. The assessing clinician could probe for more information if necessary, to select the primary target symptom and assess overall symptom severity. Patient preferences for available Step 1 treatment options are also enquired. The full questionnaire and screening questions are presented as [an internet appendix](#).

SOFTWARE

The FTN software was created by a Finnish software company, Kuura Health Oy. The key design principle was to create a proof of concept version that would be anonymous, not require any integration to EHR (electronic health record) systems, not become a regulated medical device and be acceptable to practicing clinicians.

FTN questionnaire was created on a public webpage, so all users use the same application. The navigator guides the person through the questionnaire. No identifying

information, including IP addresses, is collected. People are instructed not to include any identifiable information in their responses to open-ended questions. After completing the FTN, the person is presented with a summary, including an explanation of the commonly used cut-offs for symptom questionnaires. No recommendations are given, but the person is provided with generic instructions for different situations, including links to a variety of internet-based CBT-based self-help programmes (in case the person wishes to try those instead of directly seeking professional help).

After completion of the FTN, the person is provided with an eight-digit code, which is the only way to identify the responses later. The person can use the code to revisit the results, or he/she can give the code to a professional when seeking professional help. The clinician uses the code to view the results and can cut and paste the FTN summary report to the local EHR system. The clinician has a manual for a semi-structured review of the results, and for conducting a clinical interview with the patient. The interview gathers complementary information needed

to verify the situation, agree on the focus of treatment and decide on first-line treatment, if appropriate. The FTN does not dictate treatment, but treatments are decided in collaboration with the patient and the interviewing clinician.

FTN also has an “only testing” option at the start, so a person who only wishes to try the system can do so without the responses going into the database. An option to view an example summary report is also presented, to be maximally open about how the system works.

THE CASE SUMMARY AND THE FTN MANUAL FOR TREATMENT SELECTION

The FTN creates a case summary, which the clinician complements with a manualized semi-structured interview. The FTN *interview manual* supports treatment selection, in line with clinical practice guidelines, but treatment decision is always left for the assessing clinician to negotiate with the patient. The FTN manual is also adjusted to local circumstances during the implementation, so that the stepped care model is populated with treatments available at that site. First-line Therapies initiative is providing training and support for the implementation of several Step 1 and 2 treatment modalities. Here we briefly describe the general logic of the FTN manual and the associated stepped care model.

Low intensity Step 1 interventions are recommended in the manual for patients: 1) suffering from only mild to moderate symptoms based on the symptom measures and clinical assessment, and 2) not suspected of having severely impaired functioning. If the patient has had a history of suboptimal responses to psychological interventions, a higher intensity intervention from Step 2 upwards is primarily considered. Physical exercise is recommended as an adjunct to treatment if the patient had indicated openness towards it in the FTN. Patients with severe symptoms and/or with suspected severe functional impairment are referred to a face-to-face appointment with a healthcare professional.

Mild or moderate substance abuse with comorbid depression, anxiety, sleep disorder or exhaustion could be referred to Step 2 CBT-based face-to-face intervention. The First-line therapies initiative trains clinicians in motivational interviewing and CBT methods for treating substance abuse. If severe substance-related problems are suspected, patients are referred to a clinical face-to-face assessment and from there to regionally available substance-related treatment modalities.

Exceptions to the stepped care model were needed for

target symptoms lacking effective Step 1 or Step 2 treatment options in Finland, namely post-traumatic and obsessive-compulsive symptoms. For these symptoms, cases with even mild or moderate symptom levels could start at more intense treatment on Step 3, i.e., short psychotherapy. Internet-delivered CBT was also an option for mild OCD. Conversely, only Step 1 and Step 2 treatments were recommended for exhaustion.

If the initial assessment suggests suitability of low intensity treatments, the clinician explains the available Step 1 options and the most appropriate alternative is chosen collaboratively with an emphasis on patient preferences. Preferences for different Step 1 treatment modalities are inquired in the FTN. Motivation for brief couples or family intervention is only asked in the FTN if the patient had expressed their problems were highly or relatively highly related to relationship or family issues. Patients are recommended to a physician if they express a wish for medication assessment. Screening questions about the need for social or occupational health services are included in the FTN, so that these issues can be clarified in the interview.

3. PILOTING, IMPLEMENTATION AND CO-CREATION

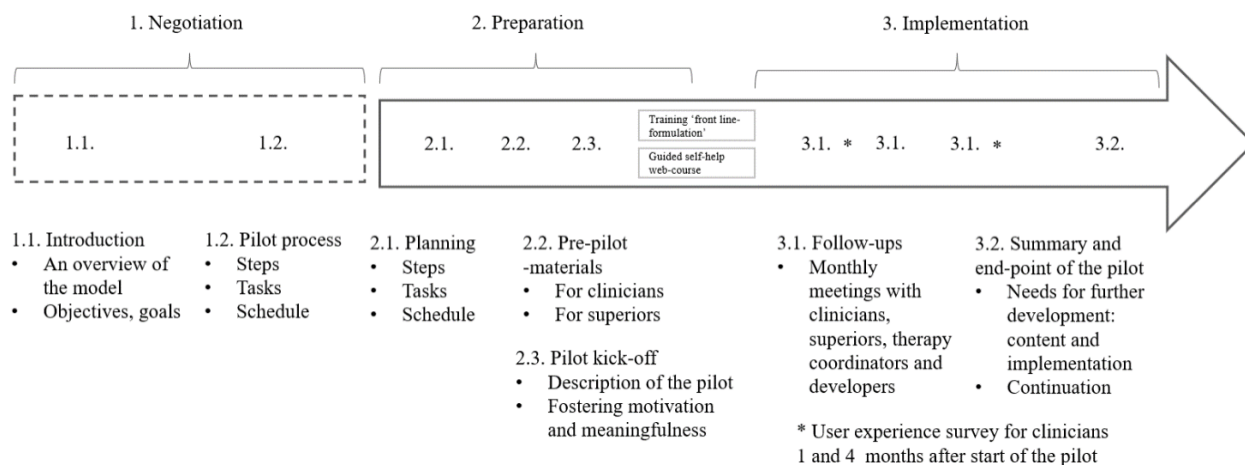
THE PILOT AREAS

Piloting of the system was done in six regions in southern Finland with a catchment area of ca 600 000. Pilots were structured as co-creation exercises between primary care and First-line Therapies initiative. Five of the six pilots were conducted in mental health services within primary care, one was conducted at a general healthcare centre. All sites offered guided self-help, internet-delivered CBT (iCBT) and group-based treatments. Variation in the available Step 2 treatments was large. All regions participated in further training of their workforce in Step 2 CBT-based treatments with the First-line therapies initiative.

THE IMPLEMENTATION PROCESS

A structured three phase implementation process was developed to ensure a co-creative way to build a workflow applicable to regional structures and processes (*Figure 2*). The co-creative nature of implementation was deemed essential, in order to focus on improving the workflow of the professionals at each site, and to optimally include the treatments locally available. In brief, the FTN and the stepped care model structure would be the same for all

Figure 2. The implementation process of the FTN



sites, but work roles, patient process and the treatments available for each step could vary.

The negotiation phase includes building a shared understanding of the objectives of the project, review of key elements of successful implementation, concrete planning and division of responsibilities. The key is to put the FTN in the wider context of improving access to psychosocial treatments in the region with a stepped care model, and to consider what other actions are required to achieve this goal. The FTN alone rarely solves all access problems. In practice, training and mentoring in Step 1 and Step 2 treatments and implementation of digital services are also needed. First-line therapies initiative has regional coordinators to help in this work.

The preparation phase includes co-creating the ideal state, where FTN is used to facilitate an efficient and locally feasible stepped care treatment model (Figure 3). Key questions that need to be answered are:

- What are the pilot units where the FTN is first implemented?
- How are the patients guided to the FTN?
- Who are going to conduct the clinical interviews?
- How are the interviews documented in local EHR systems?
- What kind of treatments the local stepped care model offers?
- How are patients remitted to face-to-face services, including physician assessment, substance abuse services and psychiatry?

In order to introduce stepped care into an existing

healthcare system without any new resources, ensuring enough Step 1 treatments are available is a vital part of the implementation. The FTN would only be sustained if it does not create any extra strain on the regional health system. Thus, introduction and training on guided self-help was included in all FTN pilots' preparation phases. In all regions, information about the FTN and the recommendation to use it were added to public web pages.

In the implementation phase, the day-to-day experience with the system is followed closely by people responsible for producing the service, supported by the First-line therapies project team.

4. DATA GATHERING AND ANALYSIS

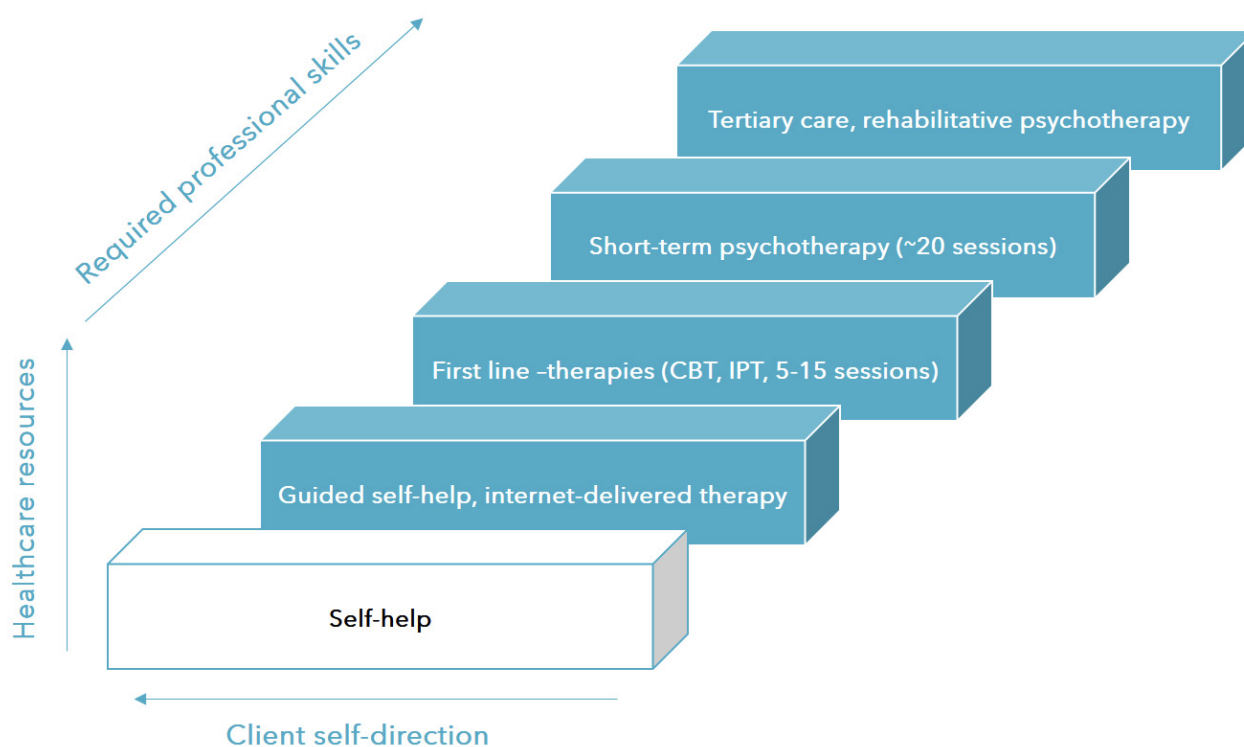
The paper presents two kinds of empirical results:

- Feasibility results (whether the approach is feasible for introducing stepped care to Finland, surveyed from professionals using the system),
- the FTN data (anonymous responses to FTN from October 2021 to May 2022).

This study was approved by the ethical committee of Helsinki and Uusimaa hospital district (HUS/3150/2020) and the study permission was granted by Helsinki and Uusimaa Hospital district (HUS/230/2022).

FEASIBILITY DATA

Figure 3. The Finnish stepped care model. The blue boxes illustrating Steps 1-4. The white box illustrating freely available Step 0, self-help without any professional interference



Feasibility data was collected anonymously from the professionals using structured questionnaires at one and four months after the introduction of the FTN. The surveys were designed by the FTN team to collect information on the satisfaction, process and quality of resulting assessment with the FTN. The second questionnaire also included questions on the implementation process of the FTN to the service system.

The one-month questionnaire collected the following information from the professionals: district, unit and occupation; the approximate number of patients that had used the FTN; the estimated average user experience of the FTN; how long and how many sessions the clinical assessment took using the information provided by the FTN; the experienced impact of the FTN on professional's work, on the quality of assessments and on the professional's clinical record entries; and the pros and cons of the FTN and a general grade.

In addition to the above, the four-month questionnaire collected the following information: what the professionals deemed to have supported in the introduction of the FTN in the unit; how much they had been able to influence the introduction of the FTN in their unit; how much they had

received support for the use of FTN from their supervisor; net promoter score; and if the professionals wanted the FTN to remain a permanent tool.

STATISTICAL METHODS

The data were aggregated and analysed using RStudio (Version 2022.02.0) and SPSS (Version 27) software. All methods of analysis used were descriptive in nature and results are presented using arithmetic means, standard deviations and percentages. The following packages were installed in RStudio: "psych", "dplyr", "tidyr", "tidyverse", "haven" and "Rmisc".

5. RESULTS

Results are presented separately for feasibility (collected with surveys during implementation) and for the FTN (collected by the FTN).

FEASIBILITY DATA

Key data from the feasibility surveys are presented in *Table 1*. Satisfaction was inquired on scales anchored at 0 (clearly worse) and 100 (clearly better) compared to the situation before the FTN implementation. All satisfaction scores and their 95% confidence intervals were on the positive side (over 50) and all scores improved somewhat from 1 month to 4 months.

General rating for the FTN (on scale 0 to 10) was 7.7 and 92.5% of users wished to continue using the FTN as a permanent tool at four-month follow-up.

Length of the clinical interviews are presented in *Table*

Table 1. Results from the feasibility surveys

User experience	n	mean	CI (95%)	n	mean	CI (95%)
	First survey*			Second survey**		
Scale: 0-100***						
Impact on the quality of assessments	41	66	60-72	37	72	67-77
Impact on the quality of clinical notes	41	64	58-70	33	73	67-79
Impact on own work	43	70	64-76	40	73	67-80
Estimated user experience for the patient	48	70	65-75	40	71	66-76
Scale: 0-10****						
Would you recommend FTN to a colleague?	-	-		39	7.9	7.3-8.6
Overall rating of FTN	44	7.7	7.2-8.2	39	7.8	7.4-8.3
Scale: Yes/No						
Do you want to keep the FTN as a permanent tool	-	-		40	92.5%	SD 7.5%

* First survey was sent 1-2 months after implementation to professionals taking part in the pilot

** Second survey was sent 4-6 months after implementation to professionals taking part in the pilot

*** Questions were presented with a 0-100 Visual Analogue Scale with descriptive terms at the extreme limits

Impact on the quality of assessments: 0 = clearly reduced quality, 100 = clearly improved quality

Impact on the quality of clinical notes: 0 = clearly reduced quality, 100 = clearly improved quality

Impact on own work: 0 = made it extremely more difficult, 100 = made it extremely easier

Estimated user experience for the patient: 0 = extremely bad, 100 = extremely good

**** Questions were presented with a 0-10 Visual Analogue Scale without descriptive terms

2. Ca 75% of interviews lasted under 30 minutes, suggesting the use of FTN is easily introduced to normal Finnish schedules. Interestingly, the proportion of interviews shorter than 10 minutes increases from 9.1 to 17.1% from 1 month to 4 months after implementation. Only singular cases took longer than 40 minutes.

THE FTN DATA

From the start of the FTN's implementation in October 2021 until May 2022, 3219 unique sessions had been started. In 2630 (82%) the user had answered all questions, and 589 (18%) had incomplete data. Only observations with complete data were included in the analyses, because non-completers mostly quit the FTN very quickly. The median time for incomplete FTN sessions was 0 minutes

(range 0-107 minutes) and mean time for incomplete FTN sessions was 5 minutes (95% confidence interval: 4.07-6.04). The mean time to complete FTN was 29 minutes (95% confidence interval: 28.05-29.48) and median time 24 minutes (range 1.33-296 minutes). Non-completers were thus likely only testing the system, and left so little data as to make detailed analysis irrelevant. For example, of the 589 respondents with non-complete data only 132 had PHQ-9 screen response, and only 13 had response data on employment status.

Employment status of those completing the FTN is presented in [Table 3](#). Of completers, 37% were employed at the time of filling the FTN, followed by 19% receiving rehabilitation subsidy.

The results of the screening questions and symptom

Table 2. Length of clinical interview, as reported by professionals

		Time used for the clinical interview, reported by the professional					
	n	0-10 min	11-20 min	21-30 min	31-40 min	41-50 min	>
50 min							
1st Survey.	44	9.1% (4)	43.2% (19)	22.7% (10)	18.2% (8)	6.8% (3)	0
2nd Survey 2.4% (1)	41	17.1% (7)	29.3% (12)	31.7% (13)	17.1% (7)	2.4% (1)	

Table 3: Employment status of users who filled in FTN

Life situation	n	%
Employed	976	37
Rehabilitation subsidy	492	19
Unemployed	446	17
Studying	346	13
Sick leave	204	8
Retired	166	6

measures are presented in *Table 4*. Over 90% of respondents scored positive on screen questions regarding anxiety, depression or exhaustion, followed by sleeping problems (72%) social anxiety (63%), obsessive-compulsive symptoms (57%), panic disorder (43%) and symptoms of traumatic stress (33%).

The percentage of people who exceeded caseness threshold in each instrument were 64% for anxiety (GAD-7)(23), 77% for depression (PHQ-9)(24), 76% for fatigue (KEDS)(25), 31% for obsessive-compulsive disorder

(OCI-R)(26), 95% for panic disorder (PDSS-SR)(27), 60% for traumatic stress (IES)(28) and 28% for alcohol abuse (AUDIT-C)(29). Severe symptoms were reported for 19% on PHQ-9, 32% on GAD-7, 51% on SPIN(30) and 34% of PDSS-SR. This suggests that the FTN is generally feasible in this population, i.e., that a significant proportion of respondents could benefit from being rapidly offered Step 1 or Step 2 psychosocial treatments.

The FTN also asks about other problems and needs

Table 4. Results of psychometric instruments used in FTN

Psychometric instrument	n (screen positive)*	mean	SD	Cases (prevalence) **	Mild ***	Moderate ***	Severe ***
PHQ-9	2494 (94%)	14.13	5.75	1915 (73%)	747 (30%)	682 (27%)	486 (19%)
GAD-7	2527 (96%)	11.72	5.09	1627 (62%)	688 (27%)	817 (32%)	810 (32%)
KEDS	2438 (93%)	26.08	9.69	1865 (71%)	-	-	-
AUDIT-C	2630	3.25	2.77	749 (28%)	-	-	-
SPIN	1647 (63%)	30.53	15.94	832 (32%)	391 (24%)	-	832 (51%)
IES	855 (33%)	38.83	19.79	512 (19%)	-	-	-
PDSS-SR	1128 (43%)	11.04	6.16	1068 (41%)	164 (15%)	521 (46%)	383 (34%)
OCI-R	1487 (57%)	16.91	11.62	461 (18%)	-	-	-

* n (%) indicates screen-positives, i.e., those responding “yes” or “maybe” to symptom-specific screening questions and thus presented with the full instrument

** Prevalence indicates proportion of cases in the whole sample of complete respondents

*** Definition of caseness and severity based on common norms:

PHQ-9 (Patient Health Questionnaire, range: 0-27, caseness: 10-27, mild: 10-14, moderate: 15-19, severe: 20-27)

GAD-7 (Generalized Anxiety Disorder 7-item Scale, range: 0-21, caseness: 10-21, mild: 5-9, moderate: 10-14, severe: 15-21)

KEDS (Karolinska Exhaustion Disorder Scale, range: 0-54, caseness: 19-54)

AUDIT-C (Alcohol Use Disorders Identification Test-Concise, range: 0-12, caseness men: ≥6, caseness women: ≥5). No screening questions were used before Audit-C due to instrument brevity

SPIN (Social Phobia Inventory, range: 0-68, caseness: 19-68, mild: 19-29, severe: 30-68)

IES (Impact of Event Scale-Revised, range: 0-88, caseness: 33-88)

PDSS-SR (Panic Disorder Severity Scale Self-Report, range: 0-28, caseness: 2-28, mild: 2-5, moderate: 6-13, severe: 14-28)

OCI-R (Obsessive-Compulsive Inventory-Revised, range: 0-72, caseness: 21-72)

the person might have (Table 5). Unsurprisingly, sleeping problems were reported by the majority of respondents. The need for support in residential and family problems was reported by 17% and need for support in employment or studying by 21% of respondents.

Previous psychosocial treatments are also asked by the FTN. Of respondents, 72% had undergone previous psychosocial treatments. Of those with previous treatments, 46% had treatments shorter than 6 months and 27% longer than two years.

Patient readiness for different treatment modalities is also inquired by the FTN, to prime the person to discuss the

topic during the clinical interview. Results are presented in Table 6. Internet-delivered or group-based treatments were the least preferred options, but still 57% answered yes or maybe regarding internet-delivered and 39% group-delivered therapy, suggesting that also these treatment modalities may find motivated participants if offered. Only 21% reported they were not prepared to consider guided self-help. This is important, as guided self-help is very resource-light Step 1 treatment, and as such an essential part of the stepped care model supported by the First-line therapies initiative. Fully 45% of respondents wished for a medication evaluation.

Table 5. Other problems and needs reported by the respondents

Other problems & needs (n = 2630)	Yes	No	Maybe
Problems			
Drug addiction	98 (4%)	2472 (94%)	60 (2%)
Behavioural addiction	227 (9%)	2161 (82%)	242 (9%)
Sleeping problems	1903 (72%)	403 (15%)	324 (12%)
Domestic violence	80 (3%)	2473 (94%)	77 (3%)
Needs			
Support for residence/family	446 (17%)	2184 (83%)	-
Support for employment/studying	554 (21%)	2076 (79%)	-

Table 6. Patient readiness for different treatment modalities

Perceived usefulness	n	Yes	No	Maybe
Internet-delivered therapy	2630	396 (15%)	1117 (42%)	1117 (42%)
Group-delivered therapy	2630	319 (12%)	1607 (61%)	704 (27%)
Guided self-help	2630	986 (37%)	556 (21%)	1088 (41%)
Physical exercise*	2630	1088 (41%)	256 (10%)	568 (22%)
Medication evaluation	2630	1178 (45%)	739 (28%)	713 (27%)
Couples/family intervention	648	151 (23%)	338 (52%)	159 (25%)

* Those responding “I’m already exercising enough” are not included in this figure

6. DISCUSSION

This paper has described the development, piloting, implementation and feasibility study results of the FTN. The FTN is one of the key components of the Finnish First-line therapies model, an initiative building a Finnish stepped care model. Additional services of the initiative include a nationwide education system for first-line psychosocial treatments, a comprehensive digital self-help service for citizens and several support structures for professionals to manage and maintain the service. A digitally supported therapy navigator is a key element for successfully managing and sustaining a stepped care model.

Our results show that implementing the FTN is feasible from a patient, clinician and management point of view. Median time patients used to complete FTN was 24 minutes. Professionals report the system improves their work, quality of assessments and overwhelmingly wanted to continue using the system permanently. The system seems to identify a significant proportion of treatment seekers who should benefit from early access to low intensity treatments.

Our experience shows that a successful implementation requires thorough planning and a co-creation process supported by the whole organization. Implementing FTN succeeds if it is seen as a participatory process aimed at improving clinical work, simplifying processes and introducing stepped care. Simultaneously introducing Step 1 digitally supported treatments is necessary in order to help re-allocate time.

The assessment interview and the accompanying interview manual were experienced as feasible. They decreased the burden on the professionals, saved time from routine data gathering to more clinically meaningful conversation, and brought appreciated structure to the work of people conducting initial assessments. Interestingly, the use of the FTN also seems to be spontaneously spreading in clinical use, outside our official pilots.

The burden of the FTN for the patient seems acceptable. Clinical questionnaires always require some compromise between length (burden to patients) and detailed information gathering. So far, our feedback suggests a reasonable balance has been found. Interestingly, according to feedback from professionals, many patients experience the structured summary of their situation beneficial as such. Thus, the assessment interviews have been increasingly framed not only as an assessment, but also as a therapeutic intervention to create clarity and structure for the patient. Then, a jointly formulated plan for the future can be devised, ideally

increasing alliance between patient and professional. The FTN seems to decrease attrition (according to qualitative feedback from clinicians) and increase patient's likelihood to come to future appointments after the assessment interview.

EMPIRICAL RESULTS FROM THE FTN DATA

The key aim of the FTN is to identify the people who would benefit from quick access to evidence-based, symptom-matched psychosocial treatments as first-line treatment. This should improve the outcome of those individual patients (instead of waiting or receiving less effective treatments) and the stepped care model should help conserve scarce resources (physician time, long psychotherapy) for those unlikely to benefit from short-term treatments.

In our sample, depression, anxiety and exhaustion were dominant symptoms with over 90% screen-positive on these domains. Correspondingly 64-77% exceeded the caseness threshold for these symptoms in psychometric instruments. Two-thirds were reporting problems in sleeping. These findings are comparable to previous studies among subjects seeking help in primary care or IAPT services (14,31).

However, as only 19% reported severe symptoms on PHQ-9, and 32% on GAD-7, a large proportion of the respondents are in range where expeditious, short-term psychosocial treatments should be considered as first-line treatment, as recommended in current treatment guidelines (32–34). Our data does not allow us to separate recent past treatments from those that happened years before. Still, 28% of respondents reported no previous psychosocial treatments, and 33% reported treatments shorter than 6 months. This, again, suggests that a significant proportion of treatment seekers could benefit from rapid, low intensity short-term psychosocial treatments. These people can be directed to treatment without visiting a physician for diagnosis, saving a physician time.

Saving a physician time is important, because 45% of respondents presented a wish for medication evaluation when asked in the FTN. This is a significant proportion of the population, and a specific process for these patients should be planned, for example, via remote consultations by physicians specialized in psychopharmacology. This could be very important for optimizing outcomes, as psychotropic medications are very rarely used according to clinical guidelines (35,36).

STRENGTHS AND WEAKNESSES OF FTN

The strengths of the FTN have been discussed in detail in combination with the design principles of the system. The key weaknesses of the system can be divided into technical and content-related issues.

Technological weaknesses of the system are related to the system lacking an integrated EHR link. The anonymous FTN data cannot be changed to identifiable data without manual copying. On the other hand, this emphasis on anonymity is a deliberate design feature of the system to encourage use of the FTN and anonymous self-help services and programmes. The field of mental health self-help applications provides rapidly expanding possibilities, so a nationally coordinated system for guiding patients to this field is potentially very valuable.

Anonymity and ease of use concerns inherently limit the importance of FTN for management purposes. A more detailed questionnaire would also be preferable from research point of view.

As the FTN is aimed at supporting clinical decision making and not replacing it, issues that need to be clinically discussed are left out from the FTN system. For example, it is essential to discuss previous treatments (reported by 72% of respondents) as part of collaborative treatment planning. As detailed history cannot be collected anonymously, the FTN only includes a screening question on previous treatments.

For some patients, completing the FTN can be a laborious process: the more complex the patient's situation is, the more screening instruments the FTN requires them to complete. Feedback from the pilot processes suggest that psychological performance, dyslexia or old age may have an effect on patients' ability to focus and answer correctly to many consecutive instruments. This might reduce the accuracy and relevance of the information collected by the FTN in individual cases. The importance of the careful and complementary assessment by the healthcare professional is thus further emphasized.

Content wise, the applicability of the FTN for people with serious substance abuse problems is a complex issue. Although these patients often present in primary care, they have not been considered ideally suitable for the standard stepped care model and low intensity treatments. The FTN concentrates on rapid start of treatment on Steps 1 and 2, i.e., the service that should be provided from primary care (32–34). This design feature of the system means that the FTN has little effect on entry to specialized psychiatry or to long-term psychotherapy.

It is clear from international examples that structured interviews can be used to systematize treatment selection and optimize effectiveness of stepped care systems. Effectiveness of psychosocial treatments, however, vary between contexts and countries for several reasons. Comprehensive stepped care systems also tend to become complex, multiple provider networks. Digital treatment modalities evolve more rapidly than they can be thoroughly studied. Thus, the realization of patient-relevant outcomes from implementation of the FTN should be proven in naturalistic settings, separately for each healthcare system. The proof of the pudding is in the eating, not in the laboratory. This article shows the feasibility of using FTN to improve the treatment process. The clinical utility of the resulting stepped care system, however, will need to be assessed separately using registry data. Fortunately, the regional implementation of the system will allow comparison between FTN users and others in recent years.

STRENGTHS AND WEAKNESSES OF THE FEASIBILITY STUDY

The implementation of the FTN was done as part of the First-line therapies initiative, which is part of the ongoing national reform of social and health services. Consequently, implementation of the FTN was not primarily a study about the FTN, but a joint initiative to improve local service delivery. This limited the possibility to optimize the feasibility study design from an academic perspective.

As the implementation of FTN was a stepwise procedure, the representativeness of the data increases as the implementation proceeds. It is not known how many people entered services during the study time without completing the FTN, so the representativeness of the sample to the whole primary care population is so far unknown. People who have a low threshold to take new technologies into use might be over-represented in the sample. This might cause some bias towards younger or more educated subjects, or towards milder symptoms. Further studies should more carefully assess the population representativeness of the FTN from register data.

FUTURE DEVELOPMENT OF THE FTN

The FTN will be adjusted somewhat based on the empirical data presented here. The interview and implementation manuals are continually updated to reflect feedback received and improving understanding of successful pilots.

This review process will be conducted as a joint project between all university hospitals in Finland.

In the long-term, the FTN can be developed in several ways, following international examples. The key technological question is whether the FTN data will be linked to individual clinical outcomes or not. Linking FTN to individual EHR data would open the system for data-driven prediction of treatment outcomes and care allocation based on these predictions. In other words, using machine learning algorithms to combine the prognostic information collected via FTN with subsequent monitored care outcomes could help create possibilities for data-founded care models. One example of such models is the Trier Treatment Navigator (TTN) (37,38). Other possible future directions would be to consider adding more sociodemographic and socio-economic variables to the FTN, which are already used in many similar tools like the DST and StepCare (13,15). There is a well-known sociodemographic and socio-economic gradient in mental disorder and consequent disability pension prevalence (39,40). Using these indicators integrated with machine learning algorithms and treatment outcomes could have the potential to give more accurate data-driven prognosis-matched care predictions for an individual patient's potential gain from low and/or high intensity treatment options. Perhaps even more importantly, this could also allow for better coordination of social and occupational assistance, in accordance with the Finnish aim to improve coordination between health and social services.

Even if the FTN is not linked to identifiable EHR data, the realm of anonymous self-help programmes is one of the most rapidly developing fields of mental health. For this, widening the scope of the FTN to screen for more rare disorders with proven self-help programmes could be useful for, for example, mild neuropsychiatric problems. Technologies such as augmented and virtual reality, wearable devices and internet of things, artificial intelligence, and the convergence of these into a new kind of "metaverse" will bring revolutionary ways to help people help themselves. In this scenario, the FTN will function as a central gateway to reliable and effective digital self-help services. This would also allow service developers a unique way to access patients if they manage to create effective services.

7. CONCLUSIONS

The Finnish Therapy Navigator, as presented here, appears a feasible way to improve both assessment and access to psychosocial treatments. The professionals experience the new system as overwhelmingly positive. The co-creative implementation process appears a feasible way of building regionally adapted and sustainable stepped care systems within primary care.

Our data shows that there is a significant population within Finnish primary care treatment seekers – as elsewhere in the world – who would benefit from readily available, short-term psychosocial treatments. FTN appears promising in identifying these people and guiding them to treatment.

FTN implementation is progressing rapidly, with a catchment area of 2.2 million estimated by end of 2022. This study provides justification for national implementation and further development of the FTN.

Finally, it is important to highlight that the FTN is not a technologically driven, stand-alone solution. The feasibility results presented here concern the FTN as part of the holistic First-line therapies initiative, and its service contributions, especially national co-creation and support structures, large-scale training in psychosocial treatments and several digital support systems, for patients and professionals. Combining these elements seems promising in delivering systemic change, and improving the psychosocial treatment people receive.

Supplementary Material

Supplementary data are available at [Psychiatry Fennica online](#)

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