Evaluating an Intervention to Promote Access to Mental Healthcare for Low lLanguage Proficient Migrants and Refugees across Europe (MentalHealth4All): A Study Protocol

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Liza G.G. Lent

l.g.g.vanlent@uva.nl

University of Amsterdam

Sona Hodakova

Constantine the Philosopher University in Nitra

Saskia Hanft-Robert

University Medical Center Hamburg-Eppendorf

Mike Mösko

University Medical Center Hamburg-Eppendorf

Chiara Rao

Brussels Centre for Language Studies, Vrije Universiteit Brussel

Koen Kerremans

Brussels Centre for Language Studies, Vrije Universiteit Brussel

Antoon Cox

Brussels Centre for Language Studies, Vrije Universiteit Brussel

Raquel Lázaro Gutiérrez

University of Alcalá

Özlem Temizöz

University of Surrey

Dalia Mankauskienė

Vilnius University

Łucja Biel

University of Warsaw

Emilio Di Maria

University of Genova

Barbara C. Schouten

University of Amsterdam

MentalHealthAll Consortium

Study protocol

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Abstract

Background

Migrants and refugees with low language proficiency (LLP) have a higher risk of experiencing certain mental health disorders compared to non-migrant populations. They are also more likely to experience a lack of access to mental healthcare due to language- and culture-related barriers. As part of the MentalHealth4All project, a digital multilingual communication and information platform was developed to promote access to mental healthcare for LLP migrants and refugees across Europe. This paper describes the study protocol for evaluating the platform in practice, among both health and/or social care providers (HSCPs) and LLP migrants and refugees.

Methods

We will conduct a pretest-posttest cross-national survey study to perform the platform's effect-evaluation (primary objective) and process-evaluation (secondary objective). The primary outcomes (measured at T0, T2 and T3) are four dimensions of access: availability, approachability, acceptability, and appropriateness of mental healthcare. Secondary outcomes (measured at T2) are: actual usage of the platform (i.e. tracking data), ease of use, usefulness of content, comprehensibility of information, attractiveness of content, and emotional support. Participants will be recruited from nine European countries: Belgium, Germany, Italy, Lithuania, the Netherlands, Poland, Slovakia, Spain, and the United Kingdom. Using convenience sampling through professional networks/organisations and key figures, we aim to include at least 52 HSCPs (i.e. 6-10 per country), and 260 LLP migrants (i.e. 30-35 per country). After completing a pretest questionnaire (T0), participants will be requested to use the platform and HSCPs will participate in an additional personalised training (T1). Next, participants will fill out a posttest questionnaire (T2), and will be requested to participate in a second posttest questionnaire (T3, about 6-8 weeks after T2) to answer additional questions on their experiences through a brief phone interview (T3 is optional for migrants/refugees).

Discussion

The findings of this prospective pretest-posttest cross-national study will deepen our understanding of how a multilingual platform may promote access to mental healthcare services for LLP migrants and refugees. If successful, this intervention could be used to improve access to mental healthcare services, as well as HSCPs' competencies in delivering such services, for any LLP migrants and refugees across Europe (and beyond).

Introduction

Mental health is a vital part of one's wellbeing [1–3]. Yet, about one billion people worldwide suffer from (diagnosable) mental health disorders [1, 4]. Migrants and refugees are at increased risk of suffering from specific disorders such as posttraumatic stress, depression and psychosis-related disorder, with

higher prevalence rates compared to those of non-migrant populations [5–9]. Migrants' and refugees' access to mental healthcare services is often severely hindered [10–16]. This is related to a combination of cultural barriers such as mental health stigma/taboo, and structural barriers such as low language proficiency (LLP) in the dominant language(s) of the country of residence, a lack of information about the healthcare system in one's mother tongue, and (perceived) discrimination [10, 11, 17, 18]. Language barriers between patients and health and/or social care providers (HSCPs) who do not share a common language form one of the main factors contributing to persisting health inequalities in access to (mental) healthcare [19]. Notwithstanding international human rights standards to reduce health inequalities [20], the European Commission has called for more attention to integration measures for refugees and migrants in Europe, in particular concerning access to (mental) healthcare services [21].

With the numbers of migrants and refugees at unprecedented and still increasing levels worldwide [22, 23], responding to the call made by the European Commission and promoting their access to mental healthcare is of crucial importance. To achieve this, digital or technology-based interventions could provide a necessary partial solution [11, 24, 25]. Digital interventions have several advantages over non-digital interventions, among which wider access to expert care and the possibility to use various modalities suited to different literacy levels [26]. Previous studies have shown that – particularly co-created [27] – (digital) interventions have successfully enhanced healthcare access and health outcomes in marginalized populations [28–31]. Building on these successes, our platform is designed to address the unique challenges faced by LLP refugees and migrants. Specifically in the context of promoting access to mental healthcare for LLP migrants and refugees, digital interventions could build on recommendations from previous studies by offering multilingual materials [32], including all stakeholders in a co-creation process [33], and also offering support to providers who refer to and/or offer mental health services [34].

Despite their great potential, evidence-based digital interventions to promote access to mental healthcare services for these target groups across Europe are still very scarce and often not properly evaluated in terms of their effectiveness [35]. The MentalHealth4All project aims to fill these gaps by designing and evaluating a culture-sensitive multilingual digital platform to promote this access, which is defined as "the *opportunity* to use health services, reflecting an understanding that there is a set of circumstances that allows for the use of appropriate health services" [36]. This evaluation study will primarily focus on four dimensions of access, namely: availability (i.e. the presence and capacity of facilities), approachability (i.e. access to information on (patient) rights, services available and costs of services), acceptability (i.e. cultural competence by providers), and appropriateness (i.e. how well the services provided match the needs of the refugee/migrant populations) [37, 38]. Building on insights from previous parts of the project [14, 39, 40], an evidence-based sustainable digital information and communication platform was developed to promote LLP migrants and refugees' access to mental healthcare on these four dimensions. This study protocol describes the final part of the project, which aims to prospectively evaluate (the effects and process of) the intervention in practice across nine European countries.

Methods

Objectives

Primary objective

The primary objective of this study is effect-evaluation, i.e. to evaluate the effects of the digital platform on the main dimensions of perceived access to mental healthcare services [37, 38]. Corresponding with this objective, we will answer the following research questions:

1. How does the digital platform affect participants' (i.e. migrants/refugees and HSCPs) perceptions of access to mental healthcare in terms of:

a. availability;

b. approachability;

c. acceptability; and

d. appropriateness?

Secondary objective

The secondary objective of this study is process-evaluation, i.e. to evaluate the digital platform with regard to the process of implementing the platform in healthcare practice. Corresponding with this objective, we will answer the following research questions:

2. How do participants (i.e. migrants/refugees and HSCPs) use the digital platform?

3. How do participants (i.e. migrants/refugees and HSCPs) evaluate the digital platform in terms of:

a. ease of use;

b. usefulness of the content;

c. comprehensibility of the information;

d. attractiveness of content; and

e. emotional support?

Study design

To answer the research questions, a pretest-posttest cross-national study will be conducted to evaluate the MentalHealth4All digital platform. Due to the nature of this design and the intervention, either randomising or blinding participants is not possible. We will apply an intention-to-treat approach [41, 42],

i.e. including participants regardless of how long they have used the digital platform. This approach aligns well with actual practice where, for instance, some people may search for specific information and therefore briefly use a specific part of the platform, while others may go through the entire platform to explore what possibilities there are. For each country, the ethical review board of the participating university/hospital has assessed and approved the protocol.

Study population

For this study, we aim to include two main groups of participants: (1) LLP migrants and refugees, and (2) HSCPs who have experience in providing (mental) healthcare for LLP migrants and refugees.

Inclusion criteria

The following inclusion criteria will be adhered to for migrants and refugees:

· currently living in one of the consortium's participating countries (i.e. Belgium, Germany, Italy, Lithuania, the Netherlands, Poland, Slovakia, Spain, or the United Kingdom);

· refugee/migrant background originating outside the country of residence;

· ≥ 18 years old;

· limited proficiency in the dominant language(s) of the country of residence (and therefore experiencing language barriers) as verified with a self-reported scale in the questionnaire; and

· sufficiently proficient to understand (at least) one of the languages of the multilingual digital platform (i.e. Arabic, Chinese, Dutch, English, French, German, Italian, Lithuanian, Persian, Polish, Russian, Slovak, Spanish, Turkish and Ukrainian).

· : Dutch, English, French, German, Italian, Lithuanian, Polish, Slovak, Spanish

· Arabic, Chinese, Persian, Russian, Turkish and Ukrainian

For inclusion of the HSCPs the following inclusion criteria will be used:

· experience in delivering (mental) healthcare to migrants and refugees (i.e. at least one consultation with a LLP refugee/migrant client per month);

· currently working in one of the participating European countries (i.e. Belgium, Germany, Italy, Lithuania, the Netherlands, Poland, Slovakia, Spain, or the United Kingdom); and

· sufficiently proficient to understand (at least) one of the languages of the multilingual digital platform.

Exclusion criteria

The exclusion criterion for all participants is:

· no access to the Internet (in order to use the digital platform) and impossible to arrange this (e.g. at one's medical/community centre).

Intervention

The intervention around which this evaluation study revolves is a digital platform aimed at HSCPs and LLP migrants and refugees (as well as their (informal) caregivers). The platform (see: www.mentalhealth4all.eu[1]) consists of different informative elements, including:

· one set of eight videos aimed at LLP migrants and refugees (e.g. about mental health conditions, stigma, and the healthcare system);

· one set of ten videos aimed at HSCPs (e.g. about working with interpreters, communication strategies, and recognising/addressing mental health issues in migrants and refugees); and

· a resource repository/information portal (with e.g. multilingual materials such as documents or videos about mental health or language services) [40].

The platform can be used on different devices, including computers/laptops, tablets and smartphones. For the current evaluation study, the platform will be available in fifteen languages: Dutch, English, French, German, Italian, Lithuanian, Polish, Slovak, Spanish (i.e. the dominant languages of the participating countries), Arabic, Chinese, Persian, Russian, Turkish and Ukrainian (i.e. languages representing large migrant language groups in Europe).

For the HSCPs, we have developed an accompanying training to teach them how to work with the platform, and how to integrate it into their clinical practice. The training consists of two parts: a general online webinar for HSCPs (uploaded on the platform and available in the dominant languages of the nine participating countries) on how they can use the platform in practice, and a personalised training session (either individual or in a group, and online or in-person) in which more detailed discussions will be held with a trainer on how to implement the (content of the) platform in the HSCPs' daily practice.

Procedures

This study will be carried out in nine countries represented in the MentalHealth4All consortium: Belgium, Germany, Italy, Lithuania, the Netherlands, Poland, Slovakia, Spain, and the United Kingdom. In all nine countries, we will use convenience sampling by approaching HSCPs through our existing networks and by reaching out to relevant professional organisations (e.g. psychologists, social workers). Each HSCP will be asked to approach migrants and refugees who are, for example, on a waiting list or have only recently started treatment to participate in the study. Additionally, migrants and refugees will be recruited via key figures in communities that cover the target audience of this study, for example, social workers in neighbourhood facilities, cultural/religious leaders, general practitioners/family doctors, and other prominent figures in social contexts. Besides, messages across refugee/migrant social media pages, migrant/refugee/professional organisations, and the project's social media channels will call for

participants who meet the relevant criteria. Migrants and refugees who are interested can voluntarily reach out to the research team. We will also ask participants (migrants/refugees and HSCPs) if they may know others who would want to participate in this study (i.e. 'snowballing'). Before participation, all migrants/refugees and HSCPs will receive an information factsheet about the study and an informed consent form. We will use easy-to-understand information materials in multiple languages, i.e. in the participants' mother tongue or a possible second language. Multilingual research assistants will be available to help (verbally) discuss the information in participants' mother tongue and answer possible questions.

After agreeing to participate, participants will receive the link to the questionnaires and a personalised log-in code (for both the questionnaires and the platform). Participants will then be asked to go through three different steps, as illustrated in Figure 1. First, participants will be asked to fill out the pretest questionnaire to establish a baseline, which starts by asking informed consent (T0). Second, they will be asked to use the multilingual digital platform/intervention (T1; i.e. for HSCP participants, this also includes participation in personalised training). Third, participants will be asked to fill out the posttest questionnaire to evaluate the platform's effects on the four dimensions of access to mental healthcare immediately after having used the platform (T2). Fourth, after about 6-8 weeks after T1, HSCPs will participate in a brief phone or online interview to answer some final questions on their usage of/experiences with the digital platform, and its effects on access to mental healthcare (T3). The digital platform and the questionnaires will be available online in multiple languages in order to match participants' mother tongue or a possible second language. If a participant prefers, the surveys could be administered on paper or verbally, for instance, by a (multilingual) research assistant or with possible help of an interpreter.

Measurements

All measurements can be found in Appendix I. All consortium partners agreed on the content and measurements were translated into the languages of the platform, either by human translators following current ISO standards, or by using Microsoft Translator for automatic translations that were carefully checked/corrected by native speakers. The questionnaires and platform all start by filling out a personalised code in order to link the surveys to platform usage. Only the principal and executive investigators of the university at a participant's country of residence will be able to link a personal code to a participant's identity.

Primary outcome measurements

In line with RQ1, the main study parameter is access to mental healthcare services, measured by means of four dimensions, i.e. availability, approachability, acceptability, and appropriateness [37, 38]. These four dimensions are the main endpoints for this study. Based on other existing questionnaires, we

selected and/or developed our own questions to assess these dimensions. In particular, we used existing scales for mental health literacy [43–45], and the Canadian Community Health Survey on accessibility, acceptability and availability [46] as inspiration for these endpoints. Additionally, we supplemented the dimensions with statements that were considered of particular relevance in the current context (i.e. migrants/refugees and mental health) based on the extensive expertise of the project team. These primary outcome measurements will be assessed at T0 (pretest), T2 (first posttest) and T3 (second posttest).

· **Availability of care**: the presence and capacity of facilities will be assessed with five items on a five-point Likert scale (1=strongly disagree, 5=strongly agree).

· **Approachability of care**: This dimension entails access to information on (patient) rights, services available, and costs of services, and will be assessed with six items on a five-point Likert scale (1=strongly disagree, 5=strongly agree).

· **Acceptability of care**: This dimension assesses providers' cultural competence and will be assessed with five items on a five-point Likert scale (1=strongly disagree, 5=strongly agree).

· **Appropriateness of care**: This dimension indicates how well the services provided match the needs of the refugee/migrant populations and will be assessed with six items on a five-point Likert scale (1=strongly disagree, 5=strongly agree).

Secondary outcome measurements

The secondary study parameters are related to the process-evaluation of the platform (RQ2 and RQ3), in particular, the animated videos and the resource repository/information portal and the HSCP training, which will be measured at T2 (first posttest) and at T1a (by tracking the actual usage of the digital platform). The secondary endpoints for this study are:

· **Actual usage of the digital platform**: We will monitor participants' actual usage of the platform by means of a built-in tracker. In particular, we will collect data on the time spent in total and on each separate page, the number of visits, the number of clicks, and the videos that were watched [47]. Each participant will receive a unique personal code to log into the digital platform. This will enable us to connect website usage to other outcomes from the surveys.

· **Ease of use**: Inspired by the Extended Unified Theory of Acceptance and Use of Technology (UTAUT2) [48, 49], we will use the three items of the 'Effort expectancy' subscale to measure the ease of use of the digital platform. For ease of administration (especially when the surveys have to be verbally administered by a research assistant) and consistency, we will assess all items on a five-point Likert scale (1=strongly disagree, 5=strongly agree), rather than the original seven-point Likert scale.

· **Usefulness of the content**: Inspired by the UTAUT2 [48, 49], we will use two items from the 'Performance expectancy' subscale to measure the usefulness of the digital platform. For ease of administration (especially when the surveys have to be verbally administered by a research assistant) and consistency, we will assess all items on a five-point Likert scale (1=strongly disagree, 5=strongly agree), rather than the original seven-point Likert scale.

· **Comprehensibility of the information**: We will use the three items from the subscale 'Satisfaction with comprehensibility' of the Website Satisfaction Scale [50–52]. For ease of administration (especially when the surveys have to be verbally administered by a research assistant) and consistency, we will assess all items on a five-point Likert scale (1=strongly disagree, 5=strongly agree), rather than the original seven-point Likert scale.

· **Attractiveness of content**: We will use the five items from the subscale 'Satisfaction with attractiveness' of the Website Satisfaction Scale [50–52]. For ease of administration (especially when the surveys have to be verbally administered by a research assistant) and consistency, we will assess all items on a five-point Likert scale (1=strongly disagree, 5=strongly agree), rather than the original seven-point Likert scale.

· **Emotional support**: We will use the four items from the subscale 'Satisfaction with emotional support' of the Website Satisfaction Scale [50–52]. For ease of administration (especially when the surveys have to be verbally administered by a research assistant) and consistency, we will assess all items on a five-point Likert scale (1=strongly disagree, 5=strongly agree), rather than the original seven-point Likert scale.

Other (control) measurements

For all participants, the baseline/pretest questionnaire (T0) will include sociodemographic items that inquire about participants' age, gender, education level, native country, and country of residence. For the HSCPs, we will ask additional questions about their working and post-graduate training experiences, in particular with migrants and refugees. For migrants and refugees, we will ask about the main reason for leaving their native country, and how long they have been living in their current country of residence. Furthermore, we will measure the following potentially confounding factors at T0 (pretest):

· **Mental health status** (only for LLP migrants/refugees): We will use the Mental Health Inventory-5 (MHI-5) to measure participants' mental health status [53] which is part of the SF-36 Health Survey [54]. The MHI-5 consists of five items, which we will assess on a five-point scale (1=None of the time, 5=All of the time).

· **Health literacy**: The ability to perform the basic reading and numerical tasks required to function in the healthcare environment will be assessed using the set of brief screening questions (SBSQ) [55]. The SBSQ consists of three items on a five-point scale (1=never/not at all confident, 5=always/extremely confident).

· **eHealth literacy**: Using the eHEALS [56], we will measure participants' knowledge, comfort, and perceived skills at finding, evaluating, and applying electronic health information to health problems. The eHEALS consists of eight items on a five-point Likert scale (i.e. 1=strongly disagree, 5=strongly agree).

· **Language proficiency in main country of residence's language**: We will ask participants to rate their proficiency in the main language of their country of residence using four items (i.e. speaking, listening, reading, and writing) on a five-point scale (i.e. 1=not at all fluent, 5=completely fluent).

At T2 (first posttest), we will measure the following parameters for all participants:

· **Technology acceptance**: In order to measure participants' general acceptance of health websites, we will use two items from the 'Performance expectancy' subscale, and the subscales 'Effort expectancy', and 'Behavioural intention' of the UTAUT2 [48, 49], totalling to eight items. For ease of administration (especially when the surveys have to be verbally administered by a research assistant) and consistency, we will assess all items on a five-point Likert scale (1=strongly disagree, 5=strongly agree), rather than the original seven-point Likert scale.

· **Language proficiency in the platform language**: We will ask participants to rate their proficiency in the language in which they used the multilingual digital platform using four items (i.e. listening and reading) on a five-point scale (i.e. 1=not at all fluent, 5=completely fluent).

The questionnaire at T2 (first posttest) will also include some **open-ended questions on the digital platform** (i.e., what participants liked and disliked, what they think could be added to the platform, and other comments/thoughts on the platform). At T3 (second posttest), additional **open-ended questions** will be asked on **how HSPCs and migrants/refugees have used the intervention in practice**.

Sample size calculation

Based on an a priori power analysis using G*power v3.1, with effect size set at f2 of 0.2, p-value of <.05 and power of .80, and number of groups and measurements at 2 (ANOVA, repeated measures within subjects), a sample size of N=52 is required. Therefore, we will sample at least 52 HSCPs across all nine consortium countries. Additionally, we strive to include around five times as many LLP migrants and refugees (N=260). In each country, we aim to include about 6-10 HSCPs and 30-35 migrants and refugees (to account for possible drop-out).

Statistical analysis

The latest version of IBM SPSS Statistics will be used to statistically analyse the data. The data analysis will be performed by researchers from the project lead of this work package, i.e. the University of Amsterdam. For the analysis of the primary endpoints, i.e. the four dimensions of access to mental healthcare, we will perform one-sided t-tests and repeated measure ANOVAs to evaluate differences in the measurements between the pretest (baseline survey) and posttests per group of participants (i.e. migrants/refugees and HSCPs separately). Additionally, we will perform ANOVAs to check for possible

covariates. If possible, we will perform sensitivity analyses with only the migrants/refugees who are currently experiencing self-reported mental health issues and explore differences between the participating countries. Descriptive statistics will be provided for the secondary endpoints. Additionally, descriptive statistics and frequency distributions will also be generated for the participants' socio-demographics.

[1] Pending positive results, the platform will only be available for participants with a personal code for the duration of the current study.

Discussion

This manuscript describes the study protocol for evaluating an innovative platform (with additional training for HSCPs) that provides information on (accessing) mental healthcare and language support in fifteen languages. With this intervention, we aim to improve access to mental healthcare for migrants and refugees across nine European countries (which is currently often hindered [10–16]). By means of a pretest-posttest study, we will perform a large-scale process- and effect-evaluation of the intervention across nine European countries.

The broad European geographical coverage of the MentalHealth4All consortium ensures wide dissemination of the project and recruitment of diverse groups of migrants and refugees. Despite the inherent limitations of all self-report studies, the results from the current evaluation study could thereby prove relevant for other migrant populations residing in one of the member states of the European Union, and possibly beyond. Although this study's main challenge may concern the recruitment and possible drop-out of LLP migrants and refugees, the previous work packages in the MentalHealth4All project [14, 39, 40] (*other publications in progress*) have already proven the feasibility of including these populations in our research. The consortium partners have complementary skills and expertise and ample experience in working and collaborating with LLP migrants and refugees, which enable us to draw on collaborations already in place. Additionally, in line with the benefits of co-creation [57, 58], the project has been discussed regularly with representatives of healthcare and migrant organisations who have all expressed their enthusiasm and willingness to cooperate with developing and implementing the platform in practice.

In short, this final part of the MentalHealth4All project revolves around the prospective evaluation of an innovative, inclusive, multilingual digital platform. In particular, the findings of this pretest-posttest study will help to deepen our understanding of how to promote access to mental healthcare services for LLP migrants and refugees. If successful, this intervention could be used to improve (access to) mental healthcare services for any LLP migrants and refugees across Europe (and beyond).

ABBREVIATIONS

HSCPs	Health and/or Social Care Providers
LLP	Low Language Proficient
UTAUT2	Extended Unified Theory of Acceptance and Use of Technology

Declarations

Ethics approval and consent to participate

The ethical review boards of all participating universities have assessed and approved the protocol before the start of the study: University of Amsterdam, the Netherlands (FMG-7525, project lead), Vrije Universiteit Brussel (EC-2022-383), University Medical Center Hamburg-Eppendorf, Germany (LPEK-0740), University of Genova, Italy (2024/28), Vilnius University, Lithuania (did not require approval), University of Warsaw, Poland (288/2024), the Constantine the Philosopher University, Slovakia (UKF-2022/842-2:191013), University of Alcalá, Spain (CEIP/2024/3/059), and University of Surrey, United Kingdom (FASS 23-24 035 EGA).

Consent for publication

Not applicable.

Availability of data and materials

Not applicable.

Competing interests

The authors confirm that they have no competing interests.

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Authors' contributions

BS obtained funding for the project, with support from the entire project team. LL and BS are responsible for the conception and design of the current study, to which critical feedback was provided by all other authors. Building on the original funding application by the entire project team, LL drafted the study protocol for ethical submission and the current manuscript. All other authors provided significant input by means of critical revisions and have read and approved the final manuscript.

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Figures

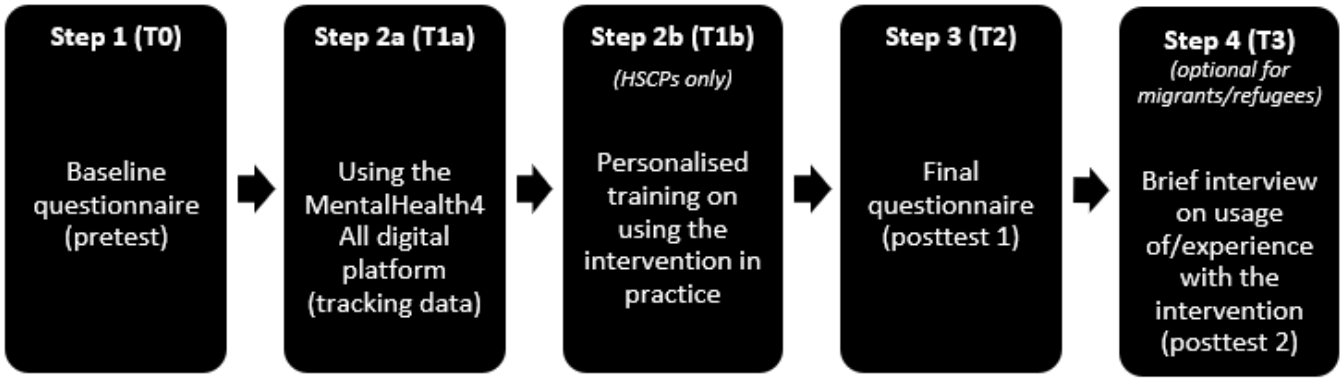

Figure 1

Participation process